COUNTY OF TULARE

RESOURCE MANAGEMENT AGENCY

5961 South Mooney Boulevard
Visalia, CA 93277

Traver Community Wastewater System Project

Draft Environmental Impact Report
(SCH# 2017081024)

October 2017

Prepared for:

County of Tulare Resource Management Agency
Economic Development and Planning Branch
Environmental Planning Division

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Executive Summary

This Draft Environmental Impact Report (DEIR) concludes that the proposed Traver Community Wastewater System Project ("Project" or "Proposed Project") would result in ***No Significant Impact*** on the environment**.** The proposed Project will result in improvements to the existing Traver community wastewater collection system and wastewater treatment plant so that the needs of the Traver Community are better served.

The EIR has been prepared consistent with the California Environmental Quality Act (CEQA). Its intent is to inform the public and the Tulare County Board of Supervisors of the potential environmental impacts the proposed Project could have on resources as specified in the CEQA Guidelines. This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts in the following resource areas:

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

Although the Mandatory Findings of Significance is not a resource per se, it is required as it essentially provides a summary conclusion of the Project's potential on Long Term Impacts; Cumulative Impacts; and Impacts to Species, Historical Resources, and on Human Beings. It is at this discussion where the EIR concludes that there would be no significant adverse environmental impacts as a result of this Project.

The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public disclosure document designed to provide local and state governmental agency decision makers with an objective analysis of potential environmental consequences to support informed decision-making. This EIR (State of California Clearinghouse # 2017081024) has been prepared by Tulare County in accordance with CEQA Guidelines §15120 through §15131 and §15161 regulating EIRs to evaluate the environmental consequences of the Project, to discuss alternatives to the proposed Project, and to propose mitigation measures that will offset, minimize or avoid identified significant environmental impacts. This document focuses on issues determined to be potentially significant as discussed in the Initial Study and the public scoping process completed for this Project, as well as comments received on the Notice of Preparation

(NOP) that was initially circulated for 30 days by the County of Tulare County beginning August 10, 2017. On August 31, 2017, a Public Scoping Meeting was held during the NOP comment period at Tulare County RMA Main Conference Room at 5961 South Mooney Boulevard, Visalia, CA to solicit input on the scope of the EIR. (see **Appendix "E"** of this DEIR).

PROJECT DESCRIPTION

The proposed Project will result in improvements (likely to be completed in phases) to the existing Traver community wastewater collection system and wastewater treatment plant. Improvements to the wastewaster collection system are needed to extend service to existing residences and businesses that are currently not being served, and to serve infill areas within the community that are expected to develop in the future consistent with the adopted Traver Community Plan 2014 Update. Improvements to the WWTP are needed to increase capacity and reliability to the system while increasing its efficiency and effectiveness so that the WWTP is better able to meet the needs of the community.

The proposed improvements to the collection system are shown diagrammatically on Figure 2-4. Upon completion, all of the existing and future sewage collection system will consist of either gravity mains or force mains. A new lift station will be constructed at the WWTP headworks. The work will include a 12-inch gravity main or equivalent force main on Merritt Drive from Sixth Street (Old Sate Highway 99) to Road 44 and then south along Road 44 to the WWTP. The balance of collection system improvements will include an underground crossing at the railroad at or near Merritt Drive and main extensions from the 12-inch trunk line.

The proposed improvements to the WWTP add reliability to the system while increasing its efficiency and effectiveness. The improvements are also needed to expand capacity to accommodate existing un-sewered and future residential, industrial and commercial development accounted for in the adopted Traver Community Plan 2014 Update. The Regional Water Quality Control Board (RWQCB) will likely require modifications to the Wastewater Discharge Requirements (WDR) if the WWTP is expanded or its processes are significantly changed. Along with updated WDR, it is anticipated that the Monitoring and Reporting Requirements that would be issued with the WDR would include groundwater monitoring requirements. The groundwater monitoring requirements would be used by the Regional Board to verify the effluent discharges via percolation or irrigation do not degrade the underlying groundwater. The monitoring would involve sampling from monitoring wells.

PROJECT LOCATION

The unincorporated Community of Traver is located approximately ten miles northwest of the City of Visalia in Tulare County in California's Central Valley. The proposed Project site is located approximately 50 miles east of the Coastal Range and approximately 30 miles west of the foothills of the Sierra Nevada Mountain Range. The community is generally bound to the north by Avenue 368, to the east by Road 44, to the south by Avenue 360, and to the west by State Route 99.

The topography of Traver comprises a relatively flat, level surface with no major slopes, mountain hillsides, or bodies of water. Traver sits at an approximate elevation of 290 feet above mean sea level. Wastewater collection system improvement will be located within Section 16, and the existing wastewater treatment plant (WWTP) is located within Section 15 of Township 17 South, Range 23 East, Mount Diablo Base & Meridian of the Public Land Survey System. It can be found within the Traver United States Geological Survey (USGS) 7.5-minute topographic quadrangle.

Traver WWTP (Road 44, 0.25 miles south of Avenue 368):
Latitude: 36”17’17.84”N Longitude: 119”28’28.15”W

Avenue 368 and Road 44 (intersection):
Latitude: 36”27’32.22”N Longitude: 119”28’28.37”W

Merrit Drive and Old State Route 99 (intersection):
Latitude: 36”2710.86”N Longitude: 119”29”20.31”W

PROJECT ELEMENTS

Construction-related activities of the Project are anticipated to take place 8 hours a day for a total of 120 working days (approximately 6 months depending upon weather, holidays, and weekend work). It is anticipated that the Project’s construction-related activities would require approximately eight (8) construction workers, depending on daily activities, resulting in an average of approximately 16 to 32 construction vehicle trips per day. Location of the pipeline will require construction activities in the middle of the road with equipment located on one side of the trench and materials and trench spoils on the other side of the trench. This will require continual traffic control around trenching activities. It is anticipated that two-way traffic will be maintained throughout most of the construction period. Construction-related activities of the Project would require temporary staging and storage areas for the materials and equipment.

Permits and approvals would require coordination with the San Joaquin Valley Unified Air Pollution Control District (Air District). The Air District has regulations in place to minimize the release of criteria pollutant emissions, specifically oxides of nitrogen (NOx) and particulate matter (PM10 and PM2.5), during construction-related activities.

PROJECT OBJECTIVES & BENEFITS

Project Objectives

The following six (6) objectives are desirable if the Project is constructed:

Objective 1: Connection to the existing Traver wastewater treatment facility

Benefit: Improve the existing wastewater treatment system which would provide reliable on-site wastewater removal and treatment services for the Community of Traver;

(provide an average daily flow of 0.2 million gallon per day (mgd) to meet the wastewater disposal requirements of the community.).

Objective 2: Abandonment of on-site septic tank/leach line systems

Benefit: Eventual abandonment, as applicable, of the existing individual residential on-site septic tank/leach line systems located within the Community of Traver.

Objective 3: Beneficial Environmental Impacts

Benefit: Provide a system that has the least potential to result in adverse environmental impacts and would provide an environmental benefit by eliminating wastewater discharge from on-site system tanks into the ground.

Objective 4: Protect groundwater supply

Benefit: Treat collected wastewater so as to remove constituents, such as BOD, suspended solids, nitrogen, and waterborne bacteria and viruses, to a greater extent, thereby improving subsurface water quality in the receiving groundwater basin relative to current environmental conditions.

Objective 5: Cost-Efficiency

Benefit: Provide the most cost-effective, safe, and reliable means to collect and treat wastewater to Title 22 standards.

Objective 6: Affordable and Effective

Benefit: Maintain an as affordable fees schedule to efficiently and effectively maintain and operate the wastewater system to enhance the quality of life for Traver residents.

Tulare County Objectives

The Project's purpose is consistent with a summary of key 2030 Tulare County General Plan Policies, 2015-2030 Tulare County Housing Element Policies, and Action Program 9 – Housing Related Infrastructure Needs as stated below:

Key General Plan Policies

Each resource-specific section of Chapter 3 contains a list of applicable General Plan Policies. Following is a summary of the 114 General Plan Policies the Project would support:

AG-1.7 Preservation of Agricultural Lands - The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth

Management Plan or similar types of strategies and the identification of growth boundaries for all urban areas located in the County.

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

AQ-1.3 Cumulative Air Quality Impacts - 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 Air Quality Land Use Compatibility - 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-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code Section 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 determine its consistency with the emission reduction strategies.

ERM-1.1 Protection of Rare and Endangered Species - 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.

ERM-1.2 Development in Environmentally Sensitive Areas - 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.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

HS-1.2 Development Constraints - The County shall permit development only in areas where the potential danger to the health and safety of people and property can be mitigated to an acceptable level.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

WR-2.1 Protect Water Quality - All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - 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.

PFS-1.8 Funding for Service Providers - The County shall encourage special districts, including community service districts and public utility districts to:

1. Institute impact fees and assessment districts to finance improvements,
2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and
3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems.

PF-6.4 UDBs and Interagency Coordination - The County shall use UDBs to provide a definition of an urban area for other planning programs, such as:

1. The area within the UDB should be considered as the same area for which water and sewer system planning may be needed and to be a consideration in the determination of an area required to adequately assess the availability and sufficiency of water supplies.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

2015-2030 Tulare County Housing Element Policies

Policy 2.21 Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

Action Program 9 – Housing Related Infrastructure Needs

Provide vital information used for planning and development purposes, target expansion or repair of infrastructure and municipal services to areas with the most need and secure Federal and State funding for housing-related infrastructure. Provide technical assistance to PUDs, CSDs, and Mutual to fund infrastructure improvement and expansion, ensure safe and adequate water and liquid waste disposal, and have an equitable balance of fees between new and existing residents.

PFS-2.5 New Systems or Individual Wells - 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.

Lastly, all one hundred fourteen (114) Policies are listed in Chapter 7.

Project Benefits Statement

The Project will provide the following public and private benefits to Tulare County:

1) Improve the existing wastewater treatment system to provide reliable wastewater removal and treatment services by providing an average daily flow of 0.2 million gallons per day;
2) Reduce and/or remove the threat of potential groundwater contamination caused by seepage of wastewater from failing and improperly operating septic systems (as applicable) into the underground water supply in the Community and surrounding areas;
3) Design and construct a wastewater collection and treatment system capable of adequately servicing the existing land uses and planned growth within the Traver Community Planning area; and
4) Operate and maintain a wastewater system as affordably and cost effectively as possible for the users of the system in the Community of Traver.

SUMMARY OF CHAPTERS

Chapter 1 Introduction

The County of Tulare is proposing a Project for the unincorporated community of Traver that would improve the existing wastewater treatment plant process and the associated sewer collection system.

The unincorporated Community of Traver is located approximately ten miles northwest of the City of Visalia in Tulare County in California's Central Valley. The proposed Project site is located approximately 50 miles east of the Coastal Range and approximately 30 miles west of the foothills of the Sierra Nevada Mountain Range. The community is generally bound to the north by Avenue 368, to the east by Road 44, to the south by Avenue 360, and to the west by State Route 99.

The topography of Traver comprises a relatively flat, level surface with no major slopes, mountain hillsides, or bodies of water. Traver sits at an approximate elevation of 290 feet above mean sea level. Wastewater collection system improvements will be located within Section 16, and the existing wastewater treatment plant (WWTP) is located within Section 15 of Township 17 South, Range 23 East, Mount Diablo Base & Meridian of the Public Land Survey System. It can be found within the Traver United States Geological Survey (USGS) 7.5-minute topographic quadrangle.

Local Regulatory Context: The Tulare County General Plan Update 2030 was adopted on August 28, 2012. As part of the General Plan, an EIR and background report were prepared. The General Plan background report contained contextual environmental analysis for the General Plan. The 2015 -2023 Tulare County Housing Element was adopted on November 17, 2015, and certified by State of California Department of Housing and Community Development on December 9, 2015.

Identification of Potentially Significant Impacts: Indicates that the EIR must identify potentially significant impacts consistent with CEQA Guidelines Section 15002 (h).

Consideration of Significant Impacts: Indicates that the EIR must consider significant impacts consistent with CEQA Guidelines Section 15126.2.

Mitigation Measures: Indicates that the EIR is required to contain mitigation measures consistent with CEQA Guidelines Section 15126.4.

Environmental Review Process: Summarizes steps taken prior to release of the draft EIR such as the Notice of Preparation, Scoping Meeting, and comments received from persons and/or agencies in response to the Notice of Preparation.

Chapter 2 Project Description, Objectives, and Environmental Setting

As noted earlier, the County of Tulare is proposing a Project for the unincorporated Community of Traver that would improve the existing wastewater treatment process and the associated sewer collection infrastructure. There are a variety of land uses within the Traver Community. Along SR 99, there is a mix industrial, agricultural, and commercial uses. The west side of SR 99 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.

In summary, Chapter 2 contains the following:

- Project Location: the Traver Community is generally bound to the north by Avenue 368, to the east by Road 44, to the south by Avenue 360, and to the west by State Route 99, in Tulare County, California.
- Vicinity of Project Site: Generally, in the northwest quadrant of Tulare County, as shown in Figure 2-1.
- Project Description (baseline conditions information pertinent to the proposed Project): Describes the existing collection system and the proposed improvements and the existing treatment system and the proposed improvements.
- Project Objectives and Benefits: See pages ES-4 and ES-5, or Chapter 2, pages 2-7 and 2-8)
- Regulatory Setting: Applicable statutes, rules, regulations, standards, policies, etc. of the County of Tulare, local or special districts, utilities, and State and Federal governments.

Chapter 3 Impact Analysis of Resources

The CEQA Guidelines include a Checklist of resources that must be addressed in an EIR. These resources are listed on page ES-1. There are 18 specific Resources and Mandatory Findings of Significance discussed in detail in Chapter 3. The Resources are discussed in separate sections of Chapter 3 and each section is structured as follows:

- Summary of Findings;
- Introduction, including Thresholds of Significance;
- Environmental Settings;
- Regulatory Settings such as applicable Federal, State, and Local laws, statutes, rules, regulations, and policies;
- Impact Evaluation including Project Impacts, Cumulative Impacts, Mitigation Measures, and Conclusion;
- Definitions and Acronyms; and
- References.

Some resources required expertise to evaluate the Project's potential for impacts. As such, qualified experts prepared studies, evaluations, assessments, modeling, search results, etc. (studies/technical memoranda/search results; i.e.; supporting documents) to quantify and/or qualify potential resource impacts. The supporting documents are contained in Appendices "A" through "E". Among the studies are air quality and greenhouses gases (Appendix "A"); biological (Appendix "B"); cultural (that is, archaeological, historical, cultural, and tribal cultural resources, (Appendix "C"); "Traver Community Wastewater System Improvements and its Attachment 1 – Plan of Study" (Appendix "D"); and Notice of Preparation and Public Scoping Meeting, and Agency Comment Letters Received (Appendix "E").

Chapter 4 Summary of Cumulative Impacts

A critically important component of an EIR is the Cumulative Impacts discussion. Chapter 4 discusses a Cumulative Impact Analysis under CEQA. Including Past, Present, Probable Future Projects; and a Summary of Cumulative Impacts. Whereas a project in and of itself may not result in an adverse environmental impact, its cumulative effects may. Therefore the CEQA Guidelines require a discussion of cumulative impacts per Section 15130. The Discussion of Cumulative Impacts defines cumulative impacts per Section 15355 - "Cumulative impacts" refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

With the exception of Air Quality, Greenhouse Gas Emissions, Biological, and Hydrological Resources, Chapter 4 defines Tulare County as the geographic extent of the impact analysis. The geographic area is considered the appropriate extent because:

1) The proposed Project is geographically located in Tulare County and the County of Tulare is the Lead Agency; and
2) Tulare County General Plan policies apply to the proposed Project.

The basis for the other Resource-specific cumulative impact analyses includes:

- Air Quality and Greenhouse Gas Emissions are based on the San Joaquin Valley Air Basin;
- Biological Resources are based on the San Joaquin Valley, the state of California, and the western United States;
- Hydrology is based on the Tulare County, the Tulare Lake Basin, and, the Tule Lake Sub-basin aquifers;
- Land Use Impacts are based on the County of Tulare 2030 General Plan; and
- Mandatory Findings of Significance are based on the San Joaquin Valley, the state of California, and the western United States

The Summary of Cumulative Impacts section discusses mitigable and immitigable impacts. Checklist Item criteria that would result in no impacts or less than significant impacts are discussed in the Chapter 3 and are not reiterated in Chapter 4. As noted in Chapter 4, there are no Significant and Unavoidable Impacts; and Less Than Significant Impacts With Mitigation are summarized in Table 4-3 (Checklist Items with Less than Significant with Mitigation). There are a number of cumulative impacts that do not need mitigation; these impacts are listed in Table 4-4 (Checklist Items with Less Than Significant Impacts). Chapter 8 contains a complete list of Mitigation Measures to be implemented as part of the proposed Project. Chapter 4 also contains a No Impacts summary in Table 4-5 (Checklist Items with No Impacts).

Chapter 5 Alternatives

CEQA Guidelines Section 15126.6 requires that a reasonable range of Alternatives to the proposed Project be discussed in the EIR. The proposed Project is the superior alternative. The

conclusion contained in Chapter 5 is based on the criteria established for the site and the three reasonable Alternatives. The three Alternatives evaluated are:

Alternative 1 – Sewer Force Main Collection System (with Biolac System at WWTP)
Alternative 2 – Connect to Selma-Kingsburg-Fowler Sanitation District
Alternative 3 – No Build / No Project

The proposed Alternatives were analyzed based on five evaluation criteria which include each of the objectives of the Project and the assessment of the potential environmental impacts. Each Alternative considered did not meet all the evaluation criteria, as identified in Table 5-2 (Comparison of Alternatives Attaining Evaluation Criteria), contained in Chapter 5. The following is a summary of the Alternatives:

Alternative 1 - Sewer Force Main Collection System (With Biolac System at WWTF). The environmental impacts associated with this alternative would be similar to the proposed Project because they both entail a sewer collection system and improvement to the existing WWTP. However, this alternative would likely result in more frequent Sanitary Sewer Overflows which could impact local health safety and contaminate ground water. On-going O&M costs are also higher than the proposed Project. As such, Alternative 1 is not superior to the proposed Project and is not considered a viable alternative.

Alternative 2: – Connect to Selma-Kingsburg-Fowler Sanitation District. This alternative could potentially meet all of the Project objectives, but would not attain all the Alternatives Evaluation Criteria, in particular, providing a system as affordable as possible for the community with the least environmental impact. As a low-income community, the residents would not likely have the resources to afford paying through user fees for the amortized costs of a constructing approximately 5 miles of new pipeline in addition to potential land acquisition fees, on-going O&M costs of the pipeline, and fees to SKF for wastewater treatment services. Further, this Alternative would result in more significant impacts to air quality, agricultural, biological, cultural, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, and traffic resources compared to the proposed Project resulting from development of the new pipeline. Therefore, this Alternative would not meet the criteria as the Environmentally Superior Alternative.

Alternative 3 – No Build / No Project Alternative. The No Project Alternative would avoid all potential construction- and operations-related impacts related to air quality, biological resources, cultural resources, greenhouse gas emissions, noise, and traffic resulting from the proposed Project and each of the other Alternatives identified earlier. However, the No Project Alternative would not meet the Evaluation Criteria of eliminating the potentially significant public health-related impacts the community is currently experiencing. Therefore, the consideration of the No Project alternative being the environmentally superior alternative would require the judgment of whether in balance, eliminating or avoiding certain impacts is of greater benefit environmentally than avoiding certain other impacts. The No Project Alternative, while avoiding most impacts related to the physical environment resulting from the Project, would not avoid, resolve, or remedy the existing or future potential impacts related to human health from unsanitary

conditions and/or water quality contamination by the continued use of individual septic tanks and leach fields. It would also not allow for potential future development in Traver. Therefore, this Alternative would not meet the criteria as the Environmentally Superior Alternative.

As discussed in Alternatives 1 and 2, each of the Alternatives could result in more adverse environmental impacts than the proposed Project as specified on the CEQA resources checklist. Therefore, the proposed Project is the environmentally superior alternative.

Environmental impacts associated with each of the alternatives presented compared to the Preferred Alternative are shown in **Table 5-1 Impacts of Alternatives Compared to the Proposed Project. Table 5-2** is a matrix comparing each Alternative's and the Preferred Alternative's abilities to achieve the Evaluation Criteria.

Chapter 6 Economic, Social, & Growth Inducing Impacts

This Chapter discusses the Economic, Social, and Growth Inducing effects of the Project. It contains Table 6-1 which provides the CEQA requirements and a summary of the impact analysis as follows:

- Economic Effects - The proposed Project may result in adverse financial impacts to the community. The Project may result in off-setting benefits for improved quality of life related to public health and property values to the community and immediate vicinity.

- Social Effects - The proposed Project would not result in disproportionate environmental effects on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation. The project would improve the quality of life for the community.

- Growth Inducing Effects - The proposed Project would not result in significant growth inducing impacts. The Project would serve existing Traver residents, infill development, and any other planned growth outlined and described in the adopted Traver Community Plan 2014 Update. Growth inducing impacts would be less than significant.

The overall conclusion contained in Chapter 6 is implementation of the proposed Project will result in ***Less Than Significant*** environmental impacts, either individually or cumulatively, caused by either economic, social, or growth inducing effects.

Chapter 7 Immitigable Impacts

This discussion provides determinations consistent with CEQA Guidelines Sections 15126.2 (b) Environmental Effects That Cannot Be Avoided, 15126.2 (c) Irreversible Impacts, and Statement of Overriding Considerations.

This Project will not result in significant and unavoidable impacts. All impacts have been found to be less than significant, or have been mitigated to a level considered less than significant. Based on the analysis contained in the No Environmental Impacts That Cannot Be Avoided and the No Irreversible Impact sections contained in Chapter 7, a Statement of Overriding Considerations is not necessary. The Project's merits and objectives are discussed in the Project Description and are found to be consistent with the intent of the County of Tulare and its 2030 General Plan. As noted earlier, there are one hundred fourteen (114) General Plan Policies that apply to this Project. Chapter 3 of this document provides a complete list of applicable policies for the specific resource item discussed. Thus, the Project's benefits would outweigh any unavoidable and immitigable impacts to warrant a Statement of Overriding Considerations.

Chapter 8 Mitigation Monitoring and Reporting Program

A summary of the Mitigation Monitoring and Reporting Program is contained at the end of this Executive Summary and in its entirety in Chapter 8. CEQA Section 21081.6 requires adoption of a reporting or monitoring program for those measures placed on a project to mitigate or avoid adverse effects on the environment. The mitigation monitoring and reporting program is required to ensure compliance during a project's implementation. Consistent with CEQA requirements, the Mitigation Monitoring and Reporting Program contained in this EIR include the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.

- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.

- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the Mitigation Monitoring and Reporting Program. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program.

Chapter 9 EIR Preparation

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified.

The sitting Tulare County Board of Supervisors, Tulare County Resource Management Agency RMA Director (Reed Schenke), Associate RMA Director/Economic Development and Planning Director (Michael Washam), Chief Environmental Planner (Hector Guerra) are noted.

This EIR also relied on the expertise of the consulting firm AECOM in preparing the "County of Tulare Resource Management Agency Traver Community Wastewater System Improvements Attachment 1 – Plan of Study and Technical Memorandum", which is included as Appendix "D" of this EIR. Importantly, this EIR could not have been completed without the diligent efforts of Crawford and Bowen Planning Inc. (Travis Crawford and Emily Bowen, Principals) who prepared the draft EIR.

SUMMARY OF POTENTIAL IMPACTS & MITIGATION MEASURES

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
BIOLOGICAL RESOURCES							
Impact: *Three elderberry shrubs are located on ruderal land associated with the Foster Farms industrial complex (see Figure 3 [of the Biological Evaluation]), and additional shrubs could theoretically be present in those portions of the orchards and industrial complex that were not accessible/visible at the time of the April 2014 and June 2014 field surveys. Shrubs of the PPSA are unlikely to be inhabited by VELB due to their location within a mosaic of highly disturbed lands and their isolation from riparian areas and other elderberry shrubs. For the same reasons, project-related removal of these shrubs would not constitute significant loss of habitat under CEQA. However, because the USFWS considers the removal of elderberry shrubs below 3,000 feet in elevation with stems greater than one inch in diameter tantamount to "take" of VELB, USFWS incidental take authorization would be required before the shrubs could be removed by project activities.*							
Valley Elderberry Longhorn Beetle							
3.4-1a (Avoidance) Prior to initiation of a given project within the PPSA, a survey for elderberry shrubs will be conducted by a qualified biologist, unless the entire project area is completely devoid of shrubby vegetation, in which case a elderberry survey is not necessary. If elderberry shrubs are identified during the survey, then they will be avoided. Typically, the USFWS considers a 100-foot disturbance-free buffer around elderberry shrubs complete avoidance. However, a buffer of as little as 20 feet may be arranged in consultation with the USFWS. The buffer will be clearly delineated with orange construction fencing with the appropriate signage posted. This elderberry avoidance area will be clearly marked with signs, fencing, and/or flagging, and maintained for the duration of work in that area. No construction personnel or equipment shall enter	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
the elderberry avoidance area, except for as provided under *Mitigation Measure 3.3.3b* below.							
***3.4-1b* (*Construction Monitoring*)** If project activities necessitate temporary entry into the elderberry avoidance area, approval will first be obtained from the USFWS and a qualified biologist will be on-site to monitor such activities for their duration within the avoidance area.	Prior to and during construction-related activities.	As needed if special status species are detected.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist.			
3.4-1c (Employee Education Program). Prior to implementation of projects with elderberry shrubs on site, construction personnel will receive worker environmental awareness training in the identification of the VELB and its host plant.	Prior to construction-related activities.	As needed if special status species are detected.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist working with USFS and/or CFW			
3.4-1d (Compensation). If it is not feasible to completely avoid all elderberry shrubs, then impacts to the shrubs will be mitigated in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999). This generally involves 1) conducting a protocol-level elderberry survey to assess the degree of "take" that will occur, 2) transplanting the shrubs to on-site or off-site lands protected in perpetuity under conservation easement ("conservation area"), or to a VELB mitigation bank, and 3) replacing each impacted stem with new elderberry plantings at a ratio of	During construction-related activities.	On-going during construction-related activities	Governing Entity established for operating the Wastewater System Services.	Construction manager with oversight by qualified biologist.			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
1:1 to 1:8 (depending on stem diameter, presence of beetle exit holes, and habitat type) *or* purchasing an equivalent number of credits at a VELB mitigation bank.							
San Joaquin Kit Fox							
Impact*: The San Joaquin kit fox is unlikely to occur within the PPSA. However, based on past occurrences of kit fox in the 10-mile vicinity of the PPSA, it is remotely possible that individual foxes may pass through and possibly forage on the site from time to time during dispersal movements. If a kit fox were present at the time of future construction activities in the PPSA, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the PPSA would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.*							
3.4-2a (Pre-construction Surveys). Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			
3.4-2b (Avoidance). Should a kit fox be found using any of the sites during preconstruction	Implemented only if	Throughout construction.	Governing Entity.	Determination by qualified			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.	sensitive species are encountered.			biologist.			
***3.4-2c (Minimization)*.** Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.	During construction.	As needed during construction.	Governing Entity.	Determination by qualified biologist.			
***3.4-2d (Employee Education Program)*.** Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.	Prior to construction-related activities.	As needed if special status species are detected.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist working with USFS and/or CFW			

Table ES-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
***3.4-2e (Mortality Reporting)*.** The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	During Construction.	Ongoing throughout construction.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist working with USFS and/or CFW			
Burrowing Owl							
Impact: *As discussed in Section 2.5.4, burrowing owls have the potential to nest or roost in the dry-farmed wheat field and along the margins of Banks Ditch and Road 44 adjacent to that field and the corn field to the north. Although highly unlikely due to lack of nearby foraging habitat and high levels of human disturbance, burrowing owls could also conceivably use small mammal burrows located in and around the industrial complex and along road margins elsewhere in the PPSA. If one or more owls were present in these areas at the time of construction, then construction activities would have the potential to injure or kill these individuals. Mortality of individual burrowing owls would violate California Fish and Game Code and the federal Migratory Bird Treaty Act, and is considered a significant impact of the project under CEQA.*							
3.4-3a (Pre-construction Surveys). A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			
3.4-3b (Avoidance of Active Nests). If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
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impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.							
3.4-3c (Passive Relocation of Resident Owls). During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
Nesting and Migratory Birds							
Impact: *The majority of the PPSA consists of habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Two special-status birds, the Swainson's hawk and loggerhead shrike, also have the potential to nest within the PPSA. Orchard trees of the PPSA could be used by mourning doves or American robins, while mature trees bordering the PPSA along the ruderal margin of Highway 99 could be used by the western kingbird, Bullock's and hooded orioles, and various raptors, including the Swainson's hawk. Killdeers may nest on bare ground or gravel surfaces in ruderal or industrial areas of the PPSA, and the house finch may nest in the PPSA's buildings. Cliff swallows could nest in the culverts at Road 44's crossing of Banks Ditch. Raptors and migratory birds nesting within the PPSA at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.*							
***3.4-4a* (*Avoidance*).** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
3.4-4b (Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			
3.4-4c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate	Implemented only if sensitive	Throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.	species are encountered.						
Roosting Bats							
Impact: *Development of the PPSA may result in the removal of buildings and mature trees that provide potential roosting habitat for bats, including special status species such as the pallid bat and western mastiff bat. If trees or buildings removed by construction activities contain colonial roosts, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA.*							
3.4-5a (Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.	Prior to construction.	Ongoing throughout construction.	Governing Entity.	Determination by qualified biologist.			
3.4-5b (Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			

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Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
					Initials	Date	Remarks
required, and construction could proceed.							
3.4-5c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
3.4-5d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
CULTURAL RESOURCES							
Impact: *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 However, there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. As such, the Mitigation Measures contained Appendix "C" of the IS/MND Traver Community Plan (also Appendix "C" of this document) are incorporated in their entirety by reference and are shown as follows as Mitigation Measures 3.5.-1 and 3.5-2.*							
3.5-1 If, in the course of construction or operation within the Project area, any archaeological or historical resources are uncovered, discovered, or otherwise detected or	During Construction	Daily or as needed throughout the construction period if suspicious resources	Governing Entity established for operating the Wastewater	A qualified archaeologist shall document the results of			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
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observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to: planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in place shall be considered, and an appropriate method of achieving preservation in place shall be selected and implemented, if feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential information from and about the site. Mitigation shall be consistent with CEQA Guidelines section 15126.4(b)(3).		are discovered	System Services via field evaluation of the resource finds by a qualified archaeologist	field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			
3.5-2 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the	During Construction	Daily or as needed throughout the construction period if suspicious resources	Governing Entity established for operating the Wastewater	A qualified archaeologist shall document the results of			

Table ES-1
Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
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nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.		are discovered	System Services via field evaluation of the resource finds by a qualified archaeologist	field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			
3.5-3 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Governing Entity established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

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a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not							

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Mitigation Monitoring and Reporting Program

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subject to further subsurface disturbance. a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendent.							
TRANSPORTATION/TRAFFIC							
Impact: *The Project construction-related activities may temporarily interrupt access to some properties. However, the interruptions would be no longer than a few hours while trenching- and installation-related activities occur at each property's access driveway. It is possible that Project construction-related activities would temporarily impact vehicle travel lanes while the pipelines are being installed underneath roadways.*							
3.16-1 Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction to give adequate warning to the public of the construction and of any potentially dangerous condition to be encountered as a result thereof.	During Construction activities	On-going during construction-related activities	County of Tulare/ Governing Entity established for constructing and operating the Wastewater System Services via specific contractual requirements and via on-going	Maintenance by contractor of documentary evidence of compliance. Such records to be provided to County of Tulare/Govern-ng Entity upon request			

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Mitigation Monitoring and Reporting Program

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			review of records kept by contractor to document compliance				
TRIBAL CULTURAL RESOURCES							
Impact: *Two on-site resources were identified by the CHRIS and no resources were identified by the Sacred Lands Files (SLF) search. Although all work will be limited to existing, disturbed rights-of-way, it is possible that subsurface discoveries could occur. Also, no responses were received from the tribes that were notified in compliance with AB 52 requirements through a list of potentially affected tribes provided by the NAHC. As such, it is not anticipated that Native American tribal cultural resources or remains will be found at any site within the Project planning area.*							
3.17-1 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Governing Entity established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			
3.17-1 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the	During Construction	Daily or as needed throughout the construction period if suspicious resources	Governing Entity established for operating the Wastewater	A qualified archaeologist shall document the results of			

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Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	When Monitoring is to Occur	Frequency of Monitoring	Agency Responsible for Monitoring	Method to Verify Compliance	Verification of Compliance		
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nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.		are discovered	System Services via field evaluation of the resource finds by a qualified archaeologist	field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

Chapter 1
Introduction

PROJECT SUMMARY

The proposed Project will result in improvements to the existing Traver community wastewater collection system and wastewater treatment plant. Improvements to the wastewaster collection system are needed to extend service to existing residences and businesses that are currently not being served, and to serve infill areas within the community that are expected to develop in the future consistent with the adopted Traver Community Plan 2014 Update. Improvements to both the existing collection system and the WWTP are needed to increase capacity and reliability to the system while increasing its efficiency and effectiveness so that the WWTP is better able to meet the needs of the planned community.

LOCAL REGULATORY CONTEXT

The Tulare County General Plan 2030 Update was adopted on August 28, 2012. As part of the General Plan, an EIR and Background Report were prepared. The General Plan Background Report contained contextual environmental analysis for the General Plan. The 2015 Housing Element was adopted on November 17, 2015 and certified by State of California Department of Housing and Community Development on December 9, 2015.

SCOPE AND METHODOLOGY

The County of Tulare has determined that a project level EIR fulfills the requirements of CEQA and is the appropriate level evaluation to address the potential environmental impacts of the proposed Project. A project level EIR is described in §15161 of the State CEQA Guidelines as one that examines the environmental impacts of a specific development project. A project level EIR must examine all phases of the project, including planning, construction, and operation.

This document addresses environmental impacts to the level that they can be assessed without undue speculation (CEQA Guidelines §15145). This Draft Environmental Impact Report (Draft EIR, DEIR, or EIR) acknowledges this uncertainty and incorporates these realities into the methodology to evaluate the environmental effects of the Plan, given its long-term planning horizon. The degree of specificity in an EIR corresponds to the degree of specificity of the underlying activity being evaluated (CEQA Guidelines §15146). Also, the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project (CEQA Guidelines §15151 and §15204(a)).

CEQA Guidelines §15002 (a) specifies that, “[t]he basic purposes of CEQA are to:

(1) Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.

(2) Identify ways that environmental damage can be avoided or significantly reduced.

(3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.

(4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved."[1]

CEQA Guidelines §15002 (f) specifies that, "[a]n environmental impact report (EIR) is the public document used by the governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage… An EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment…"[2]

Pursuant to CEQA Guidelines §15021 Duty to Minimize Environmental Damage and Balance Competing Public Objectives:

"(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.

(1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.

(2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

(b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

(c) The duty to prevent or minimize environmental damage is implemented through the findings required by §15091.

(d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in §15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment."[3]

[1] CEQA Guidelines, Section 15002 (a)
[2] Ibid., Section 15002 (f)
[3] Op. Cit., Section 15021.

IDENTIFICATION OF POTENTIALLY SIGNIFICANT IMPACTS

CEQA Guidelines §15002 (h) addresses potentially significant impacts, to wit, "CEQA requires more than merely preparing environmental documents. The EIR by itself does not control the way in which a project can be built or carried out. Rather, when an EIR shows that a project could cause substantial adverse changes in the environment, the governmental agency must respond to the information by one or more of the following methods:

(1) Changing a proposed project;

(2) Imposing conditions on the approval of the project;

(3) Adopting plans or ordinances to control a broader class of projects to avoid the adverse changes;

(4) Choosing an alternative way of meeting the same need;

(5) Disapproving the project;

(6) Finding that changes in, or alterations, the project are not feasible.

(7) Finding that the unavoidable, significant environmental damage is acceptable as provided in §15093."[4] (See Chapter 7)

This Draft EIR identifies potentially significant impacts that would be anticipated to result from implementation of the proposed Project. Significant impacts are defined as a "substantial, or potentially substantial, adverse change in the environment" (Public Resources Code §21068). Significant impacts must be determined by applying explicit significance criteria to compare the future project conditions to the existing environmental setting (CEQA Guidelines §15126.2(a)).

The existing setting is described in detail in each resource section of Chapter 3 of this document and represents the most recent, reliable, and representative data to describe current regional conditions. The criteria for determining significance are also included in each resource section in Chapter 3 of this document.

CONSIDERATION OF SIGNIFICANT IMPACTS

Pursuant to CEQA Guidelines §15126.2, "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land

[4] Op. Cit., Section 15002 (h).

(including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[5]

MITIGATION MEASURES

CEQA Guidelines §15126.4 specifies that:

"(1) An EIR shall describe feasible measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy.

(A) The discussion of mitigation measures shall distinguish between the measures which are proposed by project proponents to be included in the project and other measures proposed by the lead, responsible or trustee agency or other persons which are not included but the lead agency determines could reasonably be expected to reduce adverse impacts if required as conditions of approving the project. This discussion shall identify mitigation measures for each significant environmental effect identified in the EIR.

(B) Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.

(C) Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant.

(D) If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed. (*Stevens v. City of Glendale* (1981) 125 Cal.App.3d 986.)

(2) Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the adoption of a plan, policy, regulation, or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design.

(3) Mitigation measures are not required for effects which are not found to be significant.

[5] Op. Cit., Section 15126.2.

(4) Mitigation measures must be consistent with all applicable constitutional requirements, including the following:

(A) There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987); and

(B) The mitigation measure must be "roughly proportional" to the impacts of the project. *Dolan v. City of Tigard*, 512 U.S. 374 (1994). Where the mitigation measure is an ad hoc exaction, it must be "roughly proportional" to the impacts of the project. *Ehrlich v. City of Culver City* (1996) 12 Cal.4th 854.

(5) If the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency's determination."[6]

PURPOSE OF AN ENVIRONMENTAL IMPACT REPORT

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of proposed Project. This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision-makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the Project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

This summary is provided in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15123. As stated in CEQA Guidelines Section 15123(a), "an environmental impact report (EIR) shall contain a brief summary of the proposed actions and its consequences. The language of the summary should be as clear and simple as reasonably practical." As required by the Guidelines, this Draft EIR includes (1) a summary description of the proposed project, (2) a discussion of the areas of controversy associated with the project, (3) identification of the alternatives evaluated and the environmentally superior alternative, and (4) a synopsis of environmental impacts and recommended mitigation measures.

"CEQA-PLUS" - COMPLIANCE WITH NATIONAL ENVIRONMENTAL PROTECTION ACT (NEPA) ENVIRONMENTAL REVIEW REQUIREMENTS

The County is the lead agency for the purpose of complying with the requirements of the CEQA to address the environmental consequences of implementing the proposed Project and

[6] Op. Cit., Section 15126.4

its alternatives. In anticipation of the potential use of federal funds for the Preferred/Proposed Project, a "CEQA-Plus" approach has been taken with the preparation of this EIR. The CEQA-Plus approach expands the typical content requirements of an EIR to include additional information pertaining to federal environmental regulations, in accordance with the National Environmental Policy Act (NEPA), including the following:

- Endangered Species Act (ESA),
- National Historic Preservation Act (NHPA), and
- General Conformity Rule for the Clean Air Act (CAA).

In addition, the following federal forms will be completed and provided to the federal lead agency:

1. United States Department of Agriculture (USDA) Rural Utilities Service (RUS) Environmental Form

2. California State Department of Water Resources, Clean Water State Revolving Fund Environmental Information Form

This CEQA-Plus approach will allow the potential future federal lead agency to use the environmental information contained in this CEQA-Plus document in the preparation of its own NEPA compliant document.

NOTICE OF PREPARATION/NOTICE OF PUBLIC SCOPING MEETING

Pursuant to CEQA Guidelines Section 15082, a Notice of Preparation/Notice of Public Scoping Meeting (NOP/NOS) was published as a legal notice in *The Visalia Times-Delta* newspaper on August 10, 2017. Also as required by CEQA, the NOP was distributed to the State Clearinghouse of the Governor's Office of Planning and Research (OPR), to Responsible and Trustee agencies, and to other interested parties for the required 30-day public review period beginning on August 10, 2017. The NOP announced that the County intended to prepare an Environmental Impact Report (EIR) for the Project and would conduct a Public Scoping Meeting. The NOP described the Project and issues to be addressed in the EIR and welcomed written responses to the NOP. It also announced the date, time and location of the Public Scoping Meeting, indicating that any interested party was invited to attend and express comments and concerns and ask questions about the Project and discuss potential environmental impacts that could result. The NOP was also made available at the County's website at:
http://tularecounty.ca.gov/rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/traver-community-wastewater-system-improvements/traver-wwtp-notice-of-preparation/.

A copy of the NOP and related material is included in **Appendix "E".** This Appendix includes comments received in response to the NOP.

The following agencies received direct notification of the NOP:

- Governor's Office of Planning and Research
- County of Tulare (various departments/agencies)
- San Joaquin Valley Unified Air Pollution Control District
- Tulare County Local Agency Formation Commission

The Public Scoping Meeting was held during the initial 30-day NOP comment period on Thursday, August31, 2017, at 1:30 PM, in the Conference Room "L" of the Resource Management Agency at 5961 South Mooney Blvd., Visalia, California to solicit input on the scope of the EIR. No agencies or other interested parties attended.

CEQA Guidelines Section 15103 states, "Responsible and Trustee Agencies, and the Office of Planning and Research shall provide a response to a Notice of Preparation to the lead agency within 30 days after the receipt of the notice. If they fail to reply within 30 days with either a response or a well justified request for additional time, the lead agency may assume that none of those entities have a response to make and may ignore a late response."

The Table Mountain Rancheria, Caltrans, California Department of Fish and Wildlife, and Union Pacific provided comments (See Appendix "E"); no other Responsible or Trustee Agencies provided responses to the NOP.

Following completion of the Draft EIR, the lead agency shall publish another public legal notice, called a Notice of Availability (NOA) of the Draft EIR. The NOA will indicate that the Draft EIR document is available for public and agency review and comment. The NOA for this Draft EIR will be published in *The Visalia Times-Delta* announcing a 45-day public review/comment period. Pursuant to Guidelines Section 15105(a), this Draft EIR will also be simultaneously distributed to public agencies through the State Clearinghouse for a 45-day review and comment period.

Hard copies of the Draft EIR will also be made available during the review period at the County of Tulare Resource Management Agency (RMA) Permit Center, 5961 S. Mooney Blvd., Visalia, CA 93277 and the County Branch in London, CA (located at 5711 Avenue 378, Dinuba, CA) for public availability.

Written comments on the Draft EIR will be accepted by the County of Tulare at the address noted above between October 20, 2017 until close of business on November 20, 2017. Following completion of the 30-day public review period, responses to comments received on the Draft EIR will be prepared. A Final EIR, consisting of the Draft EIR (incorporated by reference), comments received and the Response to Comments, will then be prepared and provided to the County of Tulare RMA for consideration by the Board of Supervisors for certification at an announced open public hearing (scheduled for December 19, 2017). If the EIR is certified for the Project Feasibility Study approved by the Board of Supervisors on December 19, 2017, a Notice of Determination will then be filed with the County of Tulare Clerk-Recorder and also forwarded to the State Clearinghouse.

CEQA Guidelines Section 15093 requires decision-makers to balance the benefits of a Preferred/Proposed Project against any unavoidable adverse environmental effects of the

project. If the benefits of the project outweigh the unavoidable adverse environmental effects, then the decision-makers may, at the time of certification of the EIR, adopt a statement of overriding considerations, finding that the environmental effects are acceptable in light of the project's benefits to the public.

ORGANIZATION OF THE EIR

Executive Summary: The Executive Summary Chapter Summarizes the analysis in this Draft Environmental Impact Report.

Chapter 1 – Introduction: This chapter provides a brief introduction to how the Project was identified, the environmental analysis required by CEQA, and the applicability of NEPA. It also includes a description of the Notice of Preparation and Notice of Public Scoping Meeting and a summary of comments received (if any).

Chapter 2 – Project Description: Chapter 2 describes the components of the Project, its objectives, environmental setting, and the regulatory context within which the Project is evaluated.

Chapter 3 – Environmental Analysis: This chapter includes the analysis of each of the topical areas consistent with the format of Appendix G Checklist of the CEQA Guidelines and will include identification of the following:

Baseline Conditions - Environmental Setting and Regulatory Contexts: Chapter 3 will describe the baseline conditions of the existing environmental and regulatory setting for each resource topic. This will provide the context against which significant impacts will be evaluated.

Thresholds of Significance: Using the questions contained within each resource topic of the CEQA Guidelines Appendix G checklist as the basis for thresholds of significance, the EIR will describe whether the thresholds will be exceeded by Project.

Impact Analysis: Project-level potential impacts (Project-specific) and potential cumulative impacts (the incremental impacts of the Project when added to other closely closely-related past, present and reasonably-foreseeable probable future projects) will be identified for this Project.

Mitigation Measure(s): Measures will be identified that can feasibly be implemented to reduce impacts to less than significant levels

Conclusion: Each conclusion will outline whether recommended mitigation measures will, based on the impact evaluation criteria, substantially reduce or eliminate, or avoid potentially significant environmental impacts. If an impact cannot be mitigated to less than significant, it will be identified as an "unavoidable significant impact".

Status of Impact after Mitigation: Identification of whether no impact, less than significant, or significant impacts would occur following the implementation of mitigation measures. A project with unavoidable significant impacts (whether project-specific or cumulative) can only be approved if a Statement of Overriding Considerations (pursuant

to Section 15093) is included in the CEQA approval action. The Statement is required to set forth the decision-makers' reasoning, supported by substantial evidence, why the economic, legal, social, technological or other benefits of the project would outweigh the unavoidable adverse environmental effects.

Chapter 4 – Cumulative Impact Summary: This chapter summarizes the cumulative impacts identified in Chapter 3.

Chapter 5 – Alternatives: Chapter 5 describes and evaluates Alternatives to the Project. The Preferred Alternative (that is, the Project) is compared to each Alternative, and the potential environmental impacts of each are analyzed.

Chapter 6 – Economic, Social, & Growth Inducing Effects: This chapter describes economic or social effects of the Project which may be used to determine the significance of physical changes caused by the Project (Guidelines Section 15131). These economic and social effects are not in and of themselves evaluated for "significance" but only used to trace a chain of cause and effect with the focus of the analysis being on the actual *physical* changes to the environment caused thereby. This chapter will also evaluate the potential of the Project to induce further growth and the nature of that growth and the general environmental effects that could occur as a result.

Chapter 7 – Unmitigable Impacts: This chapter describes any environmental effects that cannot be avoided or that are irreversible and summarizes the substantial evidence contained in the EIR that provides the economic, legal, social, technological or other benefits that would result from the Project.

Chapter 8 – Mitigation Monitoring & Reporting Program: Provides a mitigation monitoring and reporting program that summarizes the significant environmental issues, the mitigation measures, and the agency or agencies responsible for monitoring and reporting on the implementation of the mitigation measures.

Chapter 9 – Persons Preparing the EIR: This chapter identifies all consultant(s) and agency personnel who participated in the preparation of the EIR.

Chapter 10 – References: Citations by chapter, footnoted sources, and references utilized in each chapter.

Appendices - Following the text of this Draft EIR, appendices have been included as supporting or technical reference material:

Appendix "A" - Air Quality and Greenhouse Gas emissions (using air quality modeling results found in Appendix "A" of the adopted/certified Environmental Impact Report (SCH No. 2014081023) for the Plainview Wastewater System Project)

Appendix "B" – Biological Resources – California Natural Diversity Database, RMA staff windshield survey, use of existing Google Earth aerial views

Appendix "C" – Cultural Resources – CHRIS and NAHC responses
Appendix "D" – Traver Community Wastewater System Improvements and Attachment 1 – Plan of Study
Appendix "E" – Notice of Preparation/Public Scoping Meeting; Notice of Availability

In addition to the above-noted Appendices, this document incorporates by reference the following studies contained in the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH#2014091044):

"Air Quality Analysis Report Traver Community Plan" prepared by First Carbon Solutions.

"Traver Community Plan Update Biological Evaluation Tulare County, California" prepared by Live Oak Associates, Inc.

"Cultural Resources Assessment, Proposed Planning Study Area for the Traver Community Plan Update, Tulare County, California" prepared by Sierra Valley Cultural Planning.

"Greenhouse Gas Analysis Report Traver Community Plan Update" prepared by First Carbon Solutions

"Noise Study Report" prepared by VRPA Technologies.

"Traver Community Plan Traffic Impact Assessment and Circulation Element" prepared by VRPA Technologies.

Chapter 2

Project Description

PROJECT LOCATION

The unincorporated Community of Traver is located approximately ten miles northwest of the City of Visalia in Tulare County in California's Central Valley. The proposed Project site is located approximately 50 miles east of the Coastal Range and approximately 30 miles west of the foothills of the Sierra Nevada Mountain Range. The community is generally bound to the north by Avenue 368, to the east by Road 44, to the south by Avenue 360, and to the west by State Route 99 (see Figure 2-1).

The topography of Traver comprises a relatively flat, level surface with no major slopes, mountain hillsides, or bodies of water. Traver sits at an approximate elevation of 290 feet above mean sea level. Wastewater collection system improvement will be located within Section 16, and the existing wastewater treatment plant (WWTP) is located within Section 15 of Township 17 South, Range 23 East, Mount Diablo Base & Meridian of the Public Land Survey System. It can be found within the Traver United States Geological Survey (USGS) 7.5-minute topographic quadrangle.

Traver WWTP (Road 44, 0.25 miles south of Avenue 368):
Latitude: 36"17'17.84"N Longitude: 119"28'28.15"W

Avenue 368 and Road 44 (intersection):
Latitude: 36"27'32.22"N Longitude: 119"28'28.37"W

Merrit Drive and Old State Route 99 (intersection):
Latitude: 36"2710.86"N Longitude: 119"29"20.31"W

SURROUNDING LAND USE AND OTHER COMMUNITY CHARACTERISTICS

The Traver Urban Development Boundary (UDB) area consists of approximately 368 acres as displayed in Figure 2-2. State Route (SR) 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 Community.[1]

"There are a variety of land uses within the Planning Study Area. Along SR 99, there is a mix industrial, agricultural, and commercial uses. The west side of SR 99 is dominated by agricultural

[1] Traver Community Plan 2014 Update. Adopted by the Board of Supervisors December 16, 2014. Resolution No. 2014-0898. Page 13

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."[2]

"Traver serves as a residential center for the workforce contributing to agricultural production of the surrounding region. It also serves as a highway-oriented commercial site along State Route 99 and includes a small amount of industrial development. In recent years, population of the community has been stable, and steps have been undertaken to provide many physical improvements to the town's environment. (1989 Traver CP) Modern-day Traver remains largely agricultural and agricultural-service oriented and includes roadside rest stops co-located with a specialty cheese-maker and other agri-tourism attractions along its SR 99 frontage. There are many prime agricultural and industrial properties available in this community. Traver has immediate access to rail and highway."[3]

PROJECT DESCRIPTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, §21000 et seq.), the County of Tulare Resource Management Agency (RMA) have prepared this Draft Environmental Impact Report (EIR) to evaluate the environmental effects associated with the development of the proposed Traver Community Wastewater System Improvements Project as described in the Traver Community Wastewater System Improvements Plan of Study.

The proposed Project will result in improvements (likely to be completed in phases) to the existing Traver community wastewater collection system and wastewater treatment plant. Improvements to the wastewater collection system are needed to extend service to existing residences and businesses that are currently not being served, and to serve infill areas within the community that are expected to develop in the future consistent with the adopted Traver Community Plan 2014 Update. Improvements to the WWTP are needed to increase capacity and reliability to the system while increasing its efficiency and effectiveness so that the WWTP is better able to meet the needs of the community.

Collection System

The existing sewage collection system consists of 6-inch and 8-inch polyvinyl chloride sewer mains that serve single-family residences, churches, one pre-school, one elementary school, a laundromat, two grocery convenience stores and a medical facility. The collection system conveys sewage by gravity to the existing WWTP located on the east side of Road 44 approximately ¼ mile south of Merritt Drive, as seen on Figure 2-3.

Improvements to the existing collection system are needed to accommodate existing and future development, consistent with the adopted Traver Community Plan 2014 Update. The proposed improvements to the collection system are shown diagrammatically on Figure 2-4. Upon

[2] Op Cit.
[3] Op Cit. Page 2.

completion, all of the existing and future sewage collection system will consist of either gravity mains or force mains. A new lift station will be constructed at the WWTP headworks. The work will include a 12-inch gravity main or equivalent force main on Merritt Drive from Sixth Street (Old Sate Highway 99) to Road 44 and then south along Road 44 to the WWTP. The balance of collection system improvements will include an underground crossing at the railroad at or near Merritt Drive and main extensions from the 12-inch trunk line.

Treatment System

The existing WWTP for the Traver community is a pond system with a capacity of 88,000 gallons per day (GPD) as permitted under the Waste Discharge Requirements (WDR). The wastewater plant headworks consist of a lift station, a screen, and a grinder. The plant does not have a screen for removal of large debris and rags. Treatment is accomplished through facultative lagoons. The effluent is discharged to disposal in percolation/evaporation ponds.

The proposed improvements to the WWTP add reliability to the system while increasing its efficiency and effectiveness. The improvements are also needed to expand capacity to accommodate existing un-sewered and future residential, industrial and commercial development accounted for in the adopted Traver Community Plan 2014 Update. The Regional Water Quality Control Board (RWQCB) will likely require modifications to the WDR if the WWTP is expanded or its processes are significantly changed. Along with updated WDR, it is anticipated that the Monitoring and Reporting Requirements that would be issued with the WDR's would include groundwater monitoring requirements. The groundwater monitoring requirements would be used by the Regional Board to verify the effluent discharges via percolation or irrigation do not degrade the underlying groundwater. The monitoring would involve sampling from monitoring wells.

In order to eliminate the septic systems currently serving the areas of Traver that the WWTP does not reach and to allow for reasonable anticipated community growth in the area, expansion of the WWTP would be accomplished using two 50,000-60,000 GPD capacity package treatment plants. Based on an assumed influent wastewater characterization, the effluent limits can be met with an activated sludge process with nitrification and denitrification capability.[4]

Once growth in the Community of Traver begins, an initial two 50,000-60,000 GPD package plants could be installed to handle the additional flows. The trigger for the design and installation of the first package plant would be when the average daily flow from Traver exceeds 70,400 GPD (80% of 88,000 GPD) for an entire quarter period of 3 months.[5] Additional 50,000-60,000 GPD package plants would be added as growth continues and the average daily flows continue to increase. Planning for the third package plant would likely be triggered when the average daily flow reaches 96,000 GPD (or 80% of the design capacity of the first package treatment plant).

Specific components of the package treatment plant include:

[4] Op Cit.
[5] Op Cit. Page 3.

1. Improvements to the lift station, including level controls, check valve replacement and conduit replacement;
2. Construction of a new headworks with screen and flow meter;
3. Two 50,000-60,000 MGD package plants;
4. Standby generator;
5. Miscellaneous site work and building repairs; and
6. Groundwater monitoring wells.

Typical Pipeline Construction Equipment

Construction-related activities of the Project are anticipated to take place 8 hours a day for a total of 120 working days (approximately six months depending upon weather, holidays, and weekend work). It is anticipated that construction would use, but not limited to, the following equipment:

- 1 backhoe
- 1 excavator (for trench excavation and compaction with sheepsfoot roller)
- 1 front loader
- 1 crane
- 1 grader
- 1 dump truck
- 1 paving machine
- 1 steel roller compactor
- 1 skip loader
- 1 street sweeper
- 1 semi-truck tractor with transfer trailers for pavement deliveries
- 1 concrete truck
- 1 water truck
- 1 tractor trailer for pipe deliveries
- 1 concrete cutter
- 1 work truck

Typical Pipeline Construction Traffic

It is anticipated that the Project construction-related activities would require approximately eight construction workers, depending on daily activities, resulting in an average of approximately 16 to 32 construction vehicle trips per day.

Traffic Control

Location of the pipeline will likely require construction activities in the center of the road with equipment located on one side of the trench and materials and trench spoils on the other side of the trench. This activity will require continual traffic control around trenching or other construction-related activities. It is anticipated that two-way traffic will be maintained throughout most of the construction period. It will be necessary to utilize one-way traffic control and short-duration traffic stops at times for some construction-related activities. The contractor will be allowed to open-cut for pipeline segments where the contractor can excavate, install pipe, backfill,

and resurface in one day. No open trenches will be allowed overnight without being covered with steel plates.

Material Staging

Construction-related activities of the Project would require temporary staging and storage areas for the materials and equipment. Undeveloped, fallow, or vacant properties (that have been disturbed as a result of ongoing agricultural practices or abandoned) near or within the community of Traver are the most probable properties for overnight equipment staging.

Construction Water Usage

Based upon information contained in the Report, the Project would require less than thirty (30) acre-feet of water for dust control and trench compaction during the construction period.[6]

Construction Waste Disposal

Removal of asphalt and concrete would generate construction waste that will be disposed of in accordance with applicable laws. The proposed pipeline construction is not anticipated to generate large amounts of construction waste since the construction-related activities are limited to trenching, the potential construction of a lift station, and various improvements at the existing wastewater treatment plant.

San Joaquin Valley Unified Air Pollution Control District (Air District) Permits and Approvals Needed

The Air District has regulations in place to minimize the release of criteria pollutant emissions, specifically oxides of nitrogen (NOx) and particulate matter (PM10 and PM2.5), during construction-related activities. Although permits are not issued for these regulations, these regulations do require submittal and approval of the applications, if applicable, identified below.

- Regulation VIII (Fugitive PM10 Prohibition) requires any person or agency to control fugitive dust emissions from dust-generating sources and activities including, but not limited to, construction sites, earthmoving activities, bulk material handling and transport, and construction staging areas. A Dust Control Plan (DCP) and daily recordkeeping is required for non-residential projects five (5) acres or larger and residential projects ten (10) acres or larger, or any project that involves handling more than 2,500 cubic yards of material per day on at least three (3) days of the project. If a project warrants a DCP, the DCP must be submitted to the Air District at least 30 days prior to the start of any project-related construction activities.[7] As this Project will likely not disturb 10 or more acres, a DCP may not be required for this Project; however, the Air District will make the final determination regarding the need for a DCP.

[6] Estimate based on Traver Community Wastewater System Project construction being approximately 44% of Plainview for a similar wastewater system project.

[7] Air District Fugitive Dust Control brochure, available on the Air District website at http://www.valleyair.org/brochures/docs/Dust_Control_Brochure.pdf. A complete copy of Regulation VIII requirements (Rules 8011, 8021, 8031, 8041, 8051, 8061, 8071, and 8081) can be accessed on the Air District's website at http://www.valleyair.org/rules/1ruleslist.htm.

- District Rule 9510 (Indirect Source Review) requires projects subject to the rule to submit an Air Impact Assessment (AIA) application to the Air District no later than concurrent with the submittal of the land use agency application. The rule defines a development project as a project, or portion thereof, that results in the construction of a building or facility for the purpose of increasing capacity or activity.[8] The rule also exempts any development project on a facility whose primary functions are subject to Air District permitting requirements.[9] The proposed Project includes the installation of infrastructure to provide existing and future planned residences without municipal sewage facilities with connection to an existing wastewater treatment plant, and infrastructure improvements to the wastewater treatment plant itself. The Project's criteria pollutant emissions will be below the Air District's Rule 9510 thresholds. Lastly, the Project does not increase capacity or activity and upon completion will be tied into a facility subject to Air District permitting requirements; as such, the Project is not likely subject to Rule 9510; however, the Air District will make the final determination regarding the applicability of Rule 9510.

PROJECT OBJECTIVES AND BENEFITS

The following six (6) objectives are desirable if the Project is constructed:

Objective 1: ***Connection to the existing Traver wastewater treatment facility***

Benefit: Improve the existing wastewater treatment system which would provide reliable on-site wastewater removal and treatment services for the Community of Traver; (provide an average daily flow of 0.2 million gallon per day (mgd) to meet the wastewater disposal requirements of the community.).

Objective 2: ***Abandonment of on-site septic tank/leach line systems***

Benefit: Eventual abandonment, as applicable, of the existing individual residential on-site septic tank/leach line systems located within the Community of Traver.

Objective 3: ***Beneficial Environmental Impacts***

Benefit: Provide a system that has the least potential to result in adverse environmental impacts and would provide an environmental benefit by eliminating wastewater discharge from on-site system tanks into the ground.

Objective 4: ***Protect groundwater supply***

Benefit: Treat collected wastewater so as to remove constituents, such as BOD, suspended solids, nitrogen, and waterborne bacteria and viruses, to a greater extent, thereby

[8] Air District Rule 9510, Section 3.13. A complete copy of the rule can be accessed on the Air District's website at http://www.valleyair.org/rules/currntrules/r9510.pdf.
[9] Ibid. Section 4.4.3

improving subsurface water quality in the receiving groundwater basin relative to current environmental conditions.

Objective 5: Cost-Efficiency

Benefit: Provide the most cost-effective, safe, and reliable means to collect and treat wastewater to Title 22 standards.

Objective 6: Affordable and Effective

Benefit: Maintain an as affordable fees schedule to efficiently and effectively maintain and operate the wastewater system to enhance the quality of life for Traver residents.

PERMITS REQUIRED FOR IMPLEMENTATION

The proposed Project will require permitting during the planning stage as well as construction permits. Table 2-4 lists the permits that will be required and what phase of the project they will be required during; this list may not be exhaustive depending on the timing of construction and permit requirements at that time. In addition to the permits listed in Table 2-4, the San Joaquin Valley Air Pollution Control District (Air District) will require compliance with Regulation VIII (Fugitive PM10 Prohibitions); a series of eight (8) rules adopted by the Air District that requires action to prevent, reduce or mitigate fugitive dust emissions from construction-related or other earth-moving/earth-disturbing activities. Regulation VIII may also require a District-approved Dust Control Plan prior to initiation of construction-related activities. A Dust Control Plan identifies the fugitive dust sources at the construction site and describes all of the dust control measures to be implemented before, during, and after any dust generating activity for the duration of the project.

Table 2-4: Proposed Project Required Permitting		
Permit Name	**Approving Agency**	**Project Phase**
CEQA	County of Tulare	Planning
Indirect Source Review	San Joaquin Valley Air Pollution Control District	Planning
Storm Water Pollution Prevention Plan	State Water Regional Control Board	Design
Report of Waste Discharge	Regional Water Quality Control Board	Design
Encroachment Permit	Union Pacific Railroad	Construction

Figures 2-1 Traver Vicinity Map and **2-2 Traver Aerial** were excerpted from the Traver Community Plan Update Initial Study, and **Figures 2-3 Existing Wastewater System Map and 2-4 Proposed Wastewater System Improvements** were excerpted from the Traver Community Wastewater System Improvements Plan of Study contained in Appendix "D" of this DEIR.

Figure 2-1 – Traver Vicinity Map

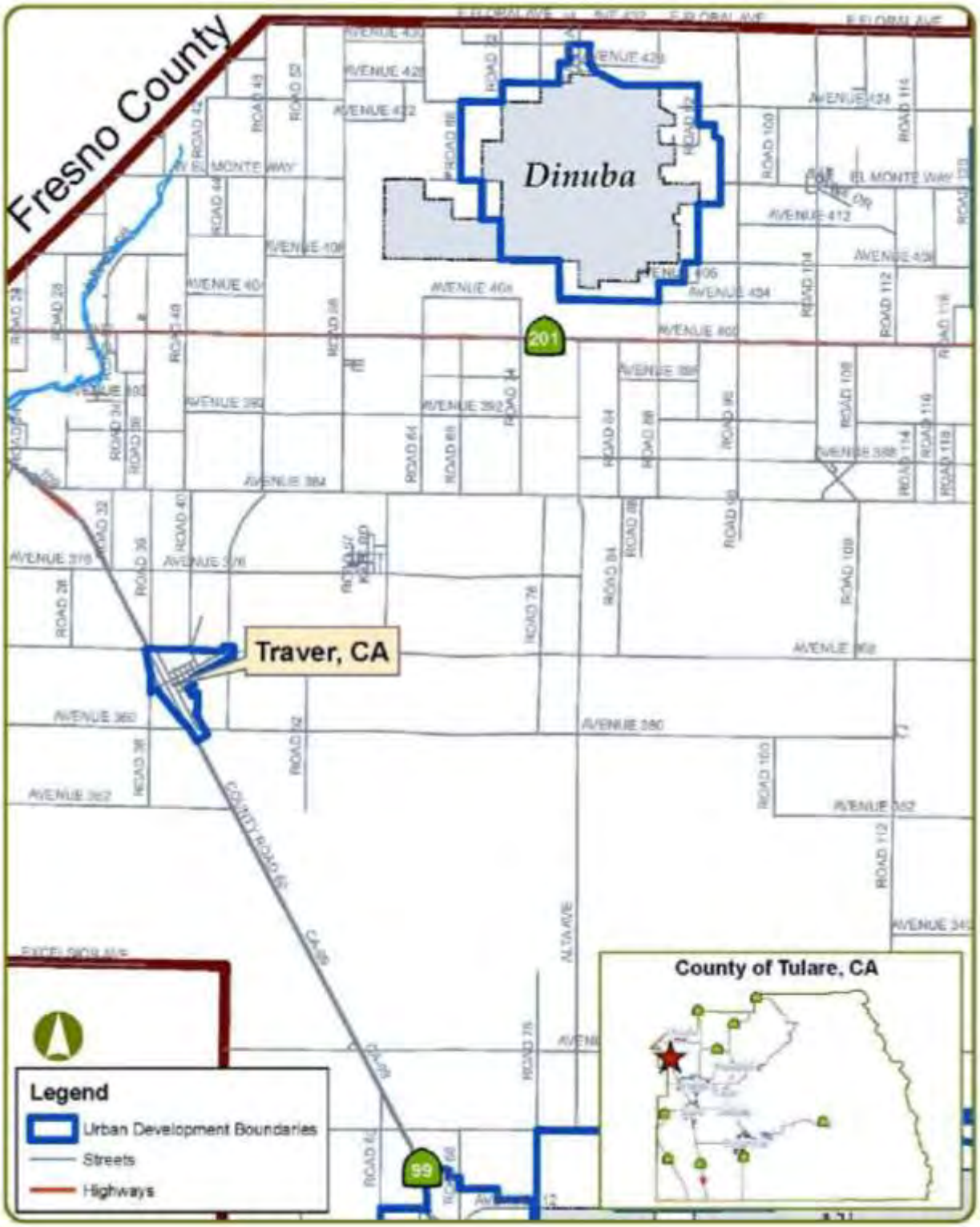
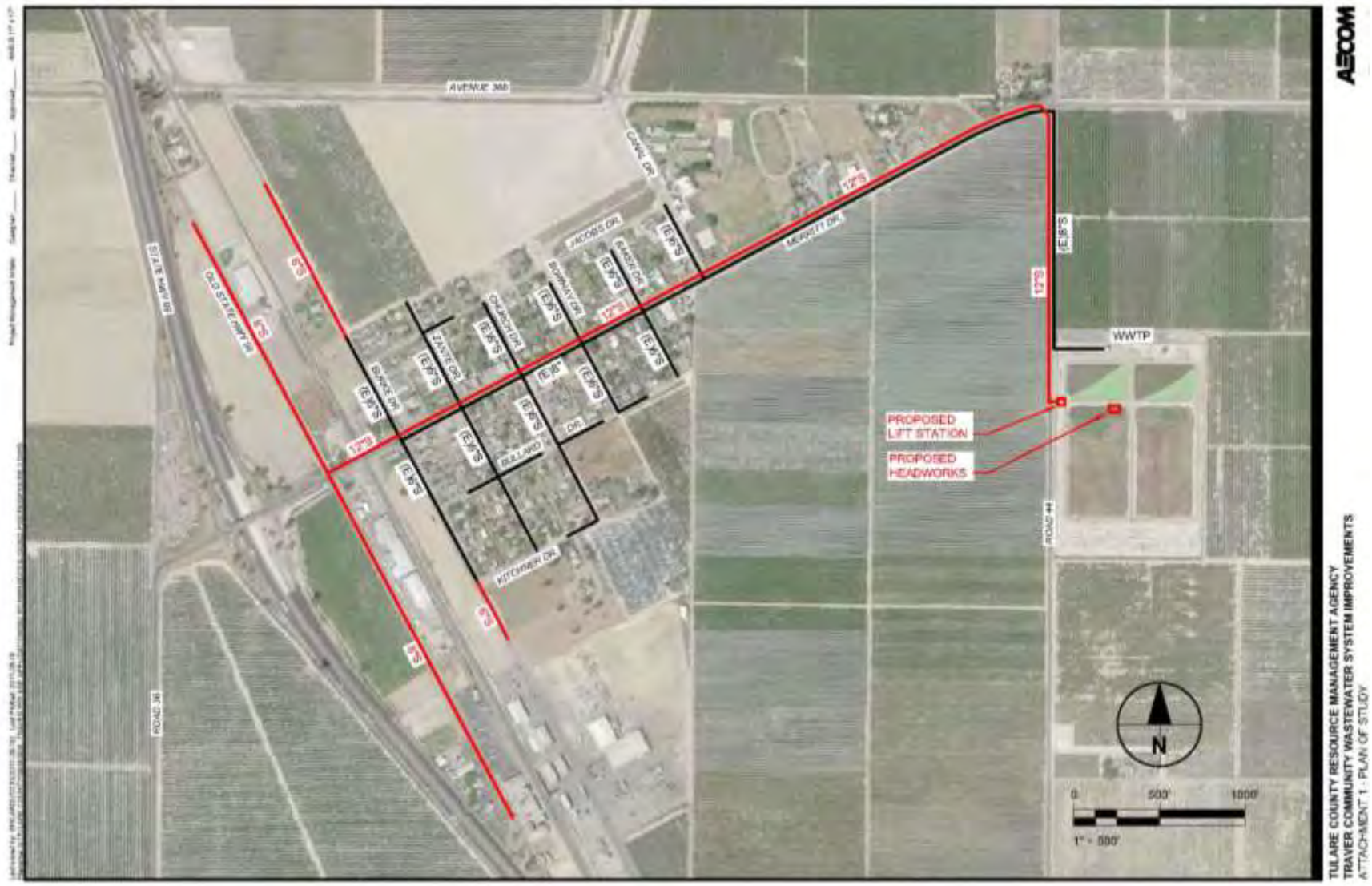


Figure 2-2 – Traver Aerial Map

Figure 2-3 – Existing Wastewater System Map

Figure 2-4 – Proposed Wastewater System Improvements



Chapter 3.1
Aesthetics

SUMMARY OF FINDINGS

Based on the impact analysis below, potential impacts to aesthetics as a result of the proposed Project are determined to be ***Less Than Significant***. The impact analyses and determinations in this Chapter are based upon observations of the proposed Project site and the surrounding area. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA requires that significant impacts on the environment be identified and, where possible, measures be added to minimize or eliminate impacts (CEQA Guidelines Section 15382). A "[s]ignificant 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…" (CEQA Guidelines Section 15382). With respect to aesthetics, potentially significant CEQA impacts include visual impacts to scenic highways, the visual character of the site, and impacts from lighting.

This section describes the existing visual environment in the vicinity of the proposed Project area using accepted methodology to evaluate aesthetic/visual landscape quality and light/glare. Aesthetic considerations tend to be subjective. The methodologies used to evaluate aesthetic impacts to visual character are qualitative in nature, and are based on photographic documentation of the site and surrounding area.

The Environmental Setting section describes scenic and aesthetic resources in the region, with special emphasis on the Preferred/ Proposed Project site and vicinity. The Regulatory setting provides a description of applicable State and local regulatory policies. A description of the potential impacts of the Preferred/ Proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts to less than significant levels, if necessary.

Thresholds of Significance:

- Impact on a scenic vista
- Impact on a scenic highway
- Impact on visual quality
- Creation of glare or impacts on nighttime views

ENVIRONMENTAL SETTING

Visual Character of the Region

Tulare County is located in a predominately agricultural region of central California. The terrain in the County varies. The western portion of the County includes a portion of the San Joaquin Valley (Valley), and is generally flat, with large agricultural areas with generally compact towns interspersed. In the eastern portion of the County are foothills and the Sierra Nevada mountain range. The project site is located on the Valley floor, which is very fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations and small and medium sized manufacturing plants make up the economic base of the Valley region. Many communities are small and rural, surrounded by agricultural uses such as row crops, orchards, and dairies. From several locations on major roads and highways throughout the County, electric towers and telephone poles are noticeable. Mature trees, residential, commercial, and industrial development, utility structures, and other vertical forms are highly visible in the region because of the flat terrain. Where such vertical elements are absent, views are expansive. Most structures are small; usually one story in height, through occasionally two story structures can be seen commercial or industrial agricultural complexes. The County provides a wide range of views from both mobile and stationary locations…"[1]

Existing Visual Conditions

The proposed Project is located within the unincorporated portion of central Tulare County in California's Central Valley, predominantly surrounded by historically disturbed agricultural land. The unincorporated Community of Traver is generally located approximately 10 miles north of the City of Visalia and is generally bound to the north by Avenue 368, to the east by Road 44, to the south by Avenue 360, and to the west by State Route 99. The Traver Urban Development Boundary area consists of approximately 368 acres and the Union Pacific Railroad maintains a line parallel to (east of) State Route 99 and through the Community. The topography of Traver comprises a relatively flat, level surface with no major slopes, mountain hillsides, or bodies of water. Traver sits at an approximately elevation of 290 feet above mean sea level.

There are a variety of land uses within the Traver Commuity. Along State Route 99, there is a mix of industrial, agricultural, and commercial uses. The west side of State Route 99 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.

All proposed pipelines would be installed within existing County rights-of-way. Occasionally, pipelines will require trenching across paved roadways to connect to other components of the pipeline infrastructure, as is the case with the inter-tie with existing Traver wastewater treatment plant main pipeline at the intersection of Merritt Avenue and Burke Drive. Additionally, at least one (1) lift station or other appurtenant structures may be constructed above ground. Land uses in the vicinity are primarily related to rural residences, agricultural production, and associated uses.

[1] Tulare County 2030 General Plan: Recirculated Draft EIR (RDEIR). Page 3.1-11.

Figures 3.1-1 thru 3.1-4 show the Community of Traver's rural location surrounded by agriculturally productive lands and typical streetscapes (including typical, modest residences).

Figure 3.1-1

Existing Wastewater Treatment Plant
On Road 44 looking north, with existing Traver Community Wastewater Treatment Plant on right and orchards on left.

Figure 3.1-2

Community of Traver
Typical road and residences, looking west on Merritt Drive.

Figure 3.1-3

Community of Traver
Looking west on Merritt Drive, typical residence (note unpaved sidewalks).

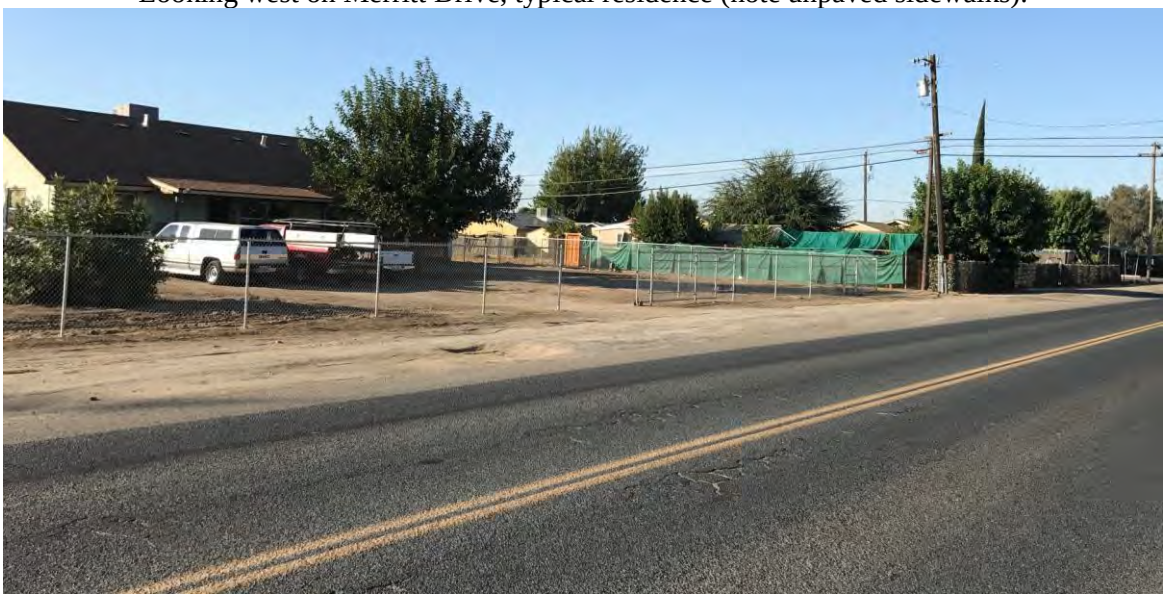


Figure 3.1-4

Looking west on Merritt Drive, at intersection of Burke Drive.

REGULATORY SETTING

***Federal Agencies & Regulations* –** None that apply to the Project

State Agencies & Regulations

Title 24 Outdoor Lighting Standards

Title 24 Outdoor Lighting Standards were adopted by the State of California Energy Commission (CEC) (Title 24, Parts 1 and 6, Building Energy Efficiency Standards (Standards) on November 5, 2003 and went into effect on October 1, 2005. The changes included new requirements for outdoor lighting, which vary according to which "lighting Zone" the equipment is in. The CEC defines rural areas as Lighting Zone 2. Existing outdoor lighting systems are not required to meet these lighting allowances. As Project operations will occur between dawn and dusk, the Project does not require lighting and the requirements of Title 24 do not apply.

Scenic Highway Program

The California Scenic Highway Program was established by the state Legislature in 1963 for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The state laws governing the scenic highways program are found in

The Streets and Highways Code Sections 260-263. In Tulare County, portions of State Routes 190,198, and 180 are eligible for state scenic highway designation.[2]

Local Policies & Regulations

"The scenic landscapes in Tulare County will continue to be one of the County's most visible assets. The Tulare County General Plan emphasizes the enhancement and preservation of these resources as critical to the future of the County. The County will continue to assess the recreational, tourism, quality of life, and economic benefits that scenic landscapes provide and implement programs that preserve and use this resource to the fullest extent."[3]

County Scenic Roadways

"Tulare County's existing General Plan identifies State designated scenic highways and County designated eligible highways. There are three highway segments designated as eligible by the State. These include State Route 198 from Visalia to Three Rivers, State Route 190 from Porterville to Ponderosa, and State Route 180 extending through Federal land in the northern portion of Tulare County. State Route 198 closely follows around Lake Kaweah and the Kaweah River, while State Route 190 follows around Lake Success and the Tule River. Both Scenic Highways travel through agricultural areas of the valley floor to the foothills and the Sierra Nevada Range… Additionally, the General Plan Update identifies preserving the rural agricultural character of SR 99 and SR 65 as valuable to the County and communities."[4]

Tulare County General Plan Policies

The Tulare County General Plan has a number of policies that apply to projects within the County of Tulare. Listed below are the policies applicable to the Project. Figure 3.1-5 shows Scenic Highways and County Scenic Routes.

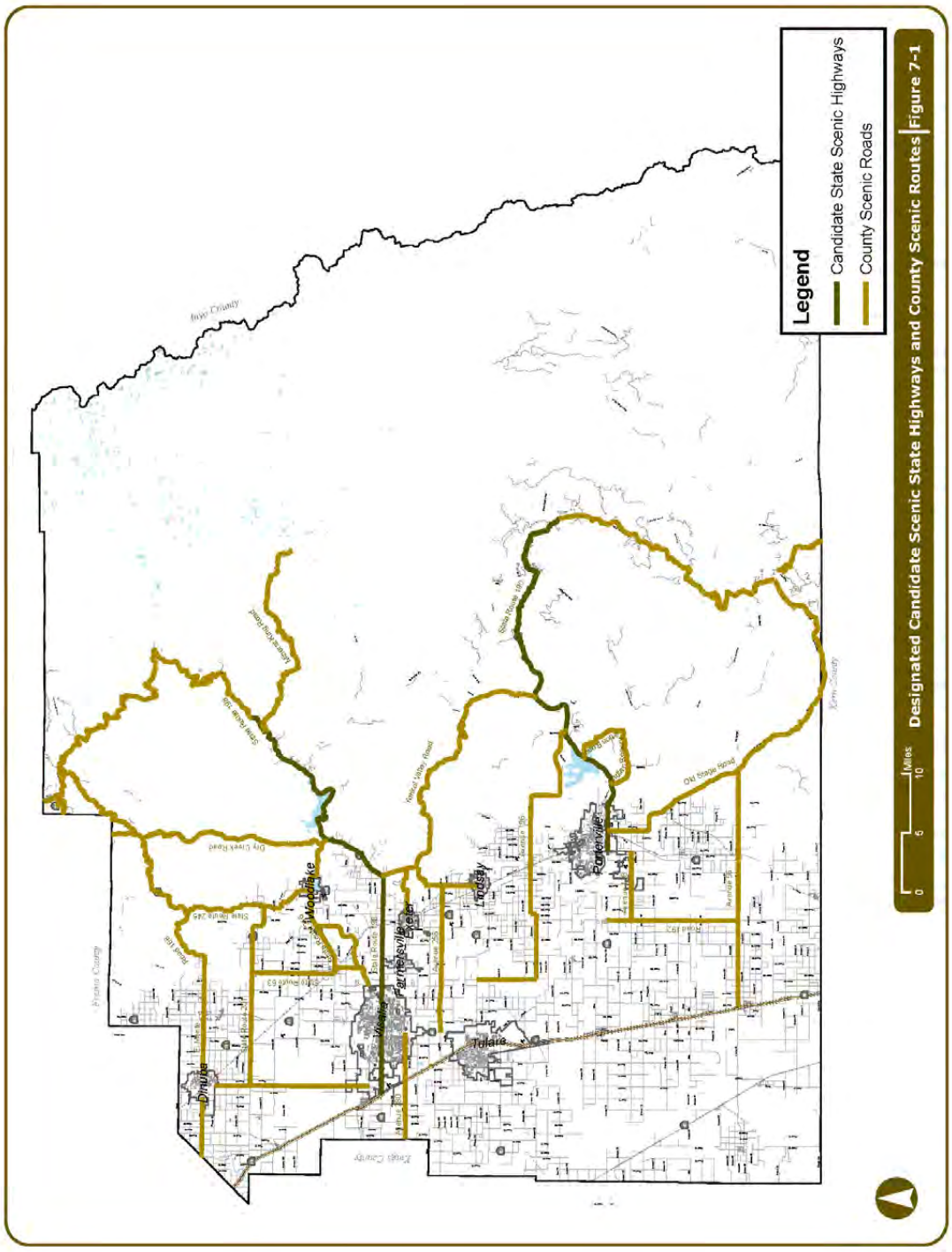
SL-1.2 Working Landscapes - The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:

1. Referencing traditional agricultural building forms and materials,
2. Screening and breaking up parking and paving with landscaping, and
3. Minimizing light pollution and bright signage.

As shown in **Figure 3.1-5** Scenic Highways and County Scenic Routes the project is not adjacent to any scenic routes.

[2] Tulare County 2030 General Plan, Goals and Policies Report Part 1. Page 7-5.
[3] Tulare County General Plan Update Goals and Policies Report. Page. A-2.
[4] Tulare County 2030 General Plan, Goals and Policies Report. Page 7-2

Figure 3.1-5
Scenic Highways and County Scenic Routes



IMPACT EVALUATION

Will the proposed Project:

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

Project Impact Analysis: ***No Impact***

There are no scenic vistas within the vicinity of the Project area. The construction-related activities and operation of underground pipelines would not result in a potential impact to the visual character of the area. At least one lift station (or other appurtenant structures) may be constructed above ground. However, these structures are visually consistent with the existing agricultural infrastructure in the area and would not result in a significant impact on scenic vistas; therefore, ***No Project-specific Impacts*** will occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

There are no scenic vistas on or near the Project area; therefore, there would be ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there are ***No Project-specific or Cumulative impacts*** related to this Checklist Item.

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

Project Impact Analysis: ***Less Than Significant Impact***

Portions of SRs 190, 198, and 180 are eligible for state scenic highway designation. However, they are not designated as such at this time. Additionally, the Tulare County 2030 General Plan lists a series of Scenic County Routes, several of which are located in agricultural areas. Road 44, Merritt Drive, and Old State Hwy 99, the roadways where the pipeline would be installed, are not designated as a Scenic County Routes.

During construction-related activities, the visual character of the Project would be impacted as a result of trenching and other construction-related activities. However, these impacts would be short-term, temporary, and are typical of these types of construction projects. The long-term operation of the underground pipelines would not present the potential to impact

the visual character of the Road 44, Merritt Drive, or Old State Hwy 99. While at least one lift station and other appurtenant structures may be constructed above ground, these structures are visually consistent with the existing agricultural and residential infrastructure along Merritt Drive and would not result in a significant impact on scenic resources such as trees, rock outcroppings, and historic buildings within a state scenic highway. Treatment plant improvements would occur at the existing Traver Community WWTP and would not impact the regional viewshed. The proposed Project would have a ***Less Than Significant Project-specific Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

The Project's related impacts would only be short-term and temporary during construction-related activities. Also, operation of the proposed Project would not result in long-term or permanent impacts to the visual character of the area. Therefore, there would be a ***Less Than Significant Impact***.

Mitigation Measure(s): ***None required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Project Impact Analysis: ***Less Than Significant Impact***

During construction-related activities, the visual character of the proposed Project area would be impacted as a result of trenching and other construction-related activities. However, these impacts would be short-term and temporary and are typical for these types of construction projects. The long-term operation of the underground pipelines would not impact the visual character of the site or area. While up more than one lift stations and other appurtenant structures may be constructed above ground, these structures are visually consistent with the existing agricultural infrastructure in the area and would not substantially degrade the existing visual character or quality of the site and its surroundings. Therefore, there would be ***Less Than Significant Project-specific Impact.***

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

Project-related impacts would only be temporary during short-term and temporary construction-related activities. Also, operation of the Project would not result in long-term or

permanent impacts to the visual character of the area. Therefore, there would be a ***Less Than Significant Impact.***

Conclusion: ***Less Than Significant Impact***.

As noted earlier, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

Construction of the Project would occur on weekdays during daylight hours, and would not require any lighting. Additionally, there would be no lighting sources associated with the operation of the Project. Therefore, the Project would have ***No Project-specific Impacts*** related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

There are no lighting sources associated with the Project. As such, there would be ***No Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there would be ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

REFERENCES

State of California, Governor's Office of Planning and Research, "Thresholds of Significance: Criteria for Defining Environmental Significance," *CEQA Technical Advice Series* http://ceres.ca.gov/ceqa/more/tas/Threshold.html

California Department of Transportation. California Scenic Highways Program. Scenic Highway Routes. Website was accessed on September 19, 2017 at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Page last updated September 7, 2011.

Caltrans, California Scenic Highway Program: "Frequently Asked Questions," which was accessed at: http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm

CEQA Guidelines, Section 15382

Tulare County General Plan 2030 Update and Final EIR (SCH # 2006041162), August 28, 2012, County Board of Supervisors Resolution No. 2012-0699 which was accessed at: http://generalplan.co.tulare.ca.us/

Tulare County General Plan 2030 Update, Background Report, February 2010; which was accessed at: http://generalplan.co.tulare.ca.us/

Title 24, 2008 Nonresidential Compliance Manual, page 6-20; which was accessed at: http://www.energy.ca.gov/title24/2008standards/nonresidential_manual.html

AECOM, *Technical Memorandum, Traver Community Wastewater System Improvements.* Tulare County, California, August 2016.

Chapter 3.2

Agricultural Land and Forestry Resources

SUMMARY OF FINDINGS

The proposed Project would result in *No Impacts* to agricultural land and forestry resources. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis that follows.

INTRODUCTION

CEQA Requirements for Evaluation of Impacts to Agricultural Land and Forestry Resources

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to agricultural land and forestry resources. As required in Section 15126, all phases of the proposed Project will be considered was part of the potential environmental impact.

As noted in Section 15126.2 a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g. floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."
The environmental setting provides a description of the Agricultural Lands and Forestry Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County

2030 General Plan Update and EIR and/or the Tulare County General Plan Background Report incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

California Department of Conservation, Division of Land Resource Protection

"The California Department of Conservation, Division of Land Resource Protection, maintains a database called the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. The map series identifies eight classifications (discussed below) and uses a minimum mapping unit size of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every two years[1]. Although the program monitors a wide variety of farmland types (more fully described below), Important Farmland consists of lands classified as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland."[2] Following are common definitions used by the DOC:

Prime Farmland (P): - *"Prime Farmland is farmland with the best combination of physical and chemical features to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date."*[3]

Farmland of Statewide Importance (S): - *"Farmland of Statewide Importance is similar to Prime Farmland but has minor shortcomings, such as greater slopes or a lesser 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."*[4]

Unique Farmland (U): - *"Unique Farmland has lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date."*[5]

Farmland of Local Importance (L): - *"Farmland of Local Importance is land important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee."*[6]

[1] California Department of Conservation, DLRP, Farmland Mapping and Monitoring Program, downloaded from, http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx
[2] Tulare County General Plan 2030 Update and Final EIR (SCH # 2006041162), August 28, 2012, page 3.10-4 County Board of Supervisors Resolution No. 2012-0699. http://generalplan.co.tulare.ca.us/
[3] Ibid.
[4] Op. Cit.
[5] Op. Cit.
[6] Op. Cit.

Grazing Land (G): - *"Grazing Land is land on which the vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, the University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres."*[7]

Urban and Built-Up Land (D): - *"Urban and Built-Up Land is land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes."*[8]

Other Land (X): - *"Other Land is land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land."*[9]

Water (W): - *"Water is defined as perennial water bodies with an extent of at least 40 acres. While the number of agricultural lands classified as Important Farmlands (i.e., Prime Farmland, Farmland of Statewide Importance, and Unique Farmland) have been decreasing over the past several years, the total acreage for all categories of farmland (including grazing land) remained relatively stable between the years 1998 and 2006 (see Table 3.10-4). The locations of these farmland types are identified in Figure 3.10-1. The farmlands are concentrated in the Rural Valley/Foothill Planning areas. No important farmlands are located in the Mountain Area."*[10]

CEQA THRESHOLDS OF SIGNIFICANCE

The Department of Conservation identifies the location of prime Agricultural Land resource areas and Williamson Act Contract lands. Thresholds of potential significance will include the following:

- Conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
- Conflict with Williamson Act Contracts
- Convert Forest Land

ENVIRONMENTAL SETTING

Tulare County exhibits a diverse ecosystems landscape created through the extensive amount of topographic relief (elevations range from approximately 200 to 14,000 feet above sea level). The County is essentially divided into three eco-regions. The majority of the western portion of

[7] Op. Cit.
[8] Op. Cit. 3.10-4 to 3.10-5.
[9] Op. Cit. 3.10-5.
[10] Op. Cit.

the County comprises the Great Valley Section, the majority of the eastern portion of the County is in the Sierra Nevada Section, and a small section between these two sections comprises the Sierra Nevada Foothill Area.[11]

Agricultural Productivity

The proposed Project site is located in the San Joaquin Valley portion of Tulare County. As indicated in the Tulare County Farm Bureau's "Facts about Agriculture;" Tulare County leads the nation in dairy production. Milk is the first agricultural commodity worth $1.7 billion in the 2015 report. Tulare County also ranks again as the #1 largest agricultural producing county in the entire nation. The title of #1 was retained by Tulare County in 2015 in light of our neighbor to the north, Fresno County being severely impacted in their acreage values by the water restrictions and drought conditions the past three years, causing their gross receipts to be lower than Tulare County.

Agriculture is the largest private employer in the county with farm employment accounting for nearly a quarter of all jobs. Processing, manufacturing, and service to the agriculture industry provides many other related jobs. Six of the top fifteen employers in the county are food handling or processing companies, which includes fruit packing houses and dairy processing plants..[12]

The *2016 Tulare County Annual Crop and Livestock Report* stated "Tulare County's total gross production value for 2015 as $6,084,672,400. This represents an increase of $1,103,694,600 or 13.7% above 2014's values of $8,084,672,400. Milk continues to be the leading agricultural commodity in Tulare County; with a total gross value of $1,718,001,000, a decrease of $822,231,000 or 32.4%. Milk produce represents 24.6% of the total crop and livestock value for 2015. Total milk production in Tulare County remained relatively stable. Livestock and Poultry's gross value of $1,022,620,000 represents a decrease of 4.89% above 2014, mostly due to lower per unit value for cattle and less poultry production."[13] "Tulare County's agricultural strength is based on diversity of the crops produced. The 2015 report covers more than 120 different commodities, 45 of which had a gross value in excess of $1,000,000. Although individual commodities may experience difficulties from year to year, Tulare County continues to produce high-quality crops that provide food and fiber to more than 90 countries throughout the world."[14]

The most recent statewide California Farmland Conversion Report (CFCR) from the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) assesses statewide farmlands from the period 2008-2010. However, Tulare County specific data from the period 2012-2014 indicates that agricultural lands in Tulare County in 2014 included 859,172 acres of important farmland (designated as FMMP Prime, Farmland of Statewide Importance, Unique

[11] Op. Cit. 3.11-5.
[12] Tulare County Farm Bureau Statistics 2016.
[13] 2015 Tulare County Annual Crop and Livestock Report, August 2016. Cover letter from Marilyn Kinoshita, Agricultural Commissioner.
[14] Ibid. http://agcomm.co.tulare.ca.us/default/index.cfm/standards-and-quarantine/crop-reports1/crop-reports-2011-2020/2015-tulare-county-annual-crop-and-livestock-report-pdf/

Farmland, or Farmland of Local Importance) and 439,962 acres of grazing land, for a total of 1,299,134 acres of agricultural land.[15]

Farmlands of Statewide Importance are defined as "lands 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."[16]

The surrounding area of Traver is agricultural-based with orchards, vineyards, and row crops (e.g. alfalfa). The adjacent properties located outside of the Traver Community UGB are generally designated Farmland of Statewide Importance[17]. Properties within the Community of Traver are designated as Urban and Built-Up Land, which is defined as land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel[18].

As presented in **Table 3.2-1**, the Tulare County Subvention Report (November 21, 2012) notes that 1,096,299 acres of farmland with Tulare County is under California Land Conservation Act (Williamson Act) contracts; a program designed to prevent premature conversion of farmland to residential or other urban uses. As of January 1, 2012, there were 1,096,299 acres of farmland under Williamson Act or Farmland Security Zone contracts in Tulare County divided by the following categories: 571,904 acres of Williamson Act prime, 513,243 acres nonprime, and 11,152 acres of Farmland Security Zone lands (The acreage totals also include 6,040 acres of Williamson Act prime contract land in nonrenewal and 7,513 acres of Williamson Act of nonprime contract land in nonrenewal.)[19]

Table 3.2-1[20]:
2012 Tulare County Lands under Williamson Act or Farmland Security Zone Contracts

Acres	Category
571,904	*Total prime = Prime active + NR Prime
513,243	*Total Nonprime = Nonprime active + NR Prime
11,152	Farmland Security Zone
1,096,299	TOTAL ACRES in Williamson Act and Farmland Security Zone contracts

**Prime total includes 6039.75 acres in nonrenewal; Nonprime total includes 7512.56 acres in nonrenewal*

Important Farmland Trends

[15] California Department of Conservation, Division of Land Resource Protection. Department of Conservation, Farmland Mapping and Monitoring Program, *Table 2012-2014. Table A-44, Part I.* *http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx*. Accessed September 19, 2017. The California Farmland Conversion Report 2008-2010 can be found at *http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2008-2010/fcr/FCR%200810%20complete.pdf*.
[16] Ibid.
[17] California Department of Conservation, Farmland Mapping and Monitoring Program, Tulare South County Map, ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/tul12_so.pdf
[18] Ibid.
[19] Tulare County Resource Management Agency. Tulare County Subvention Report for Fiscal Year 2012-2013 (submitted to Department of Conservation, November 2012)
[20] Ibid.

Using data collected by the FMMP, farmland acreage has been consistently decreasing for each two-year period since 1998[21]. In the 2010 FMMP analysis, Tulare County lost 17,502 acres of important farmland, and 17,748 acres of total farmland between 2008 and 2010; 13,815 acres of important farmland, and 14,216 acres of total farmland between 2010 and 2012; and 17,441 acres of important farmland, and 17,678 acres of total farmland between 2012 and 2014.[22]

"For Tulare County and the surrounding region, the reported major cause of this conversion is the downgrading of important farmlands to other agricultural uses (e.g., such as expanded or new livestock facilities, replacing irrigated farmland with non-irrigated crops, or land that has been fallow for six years or longer)."[23]

Forest Lands

"Timberlands that are available for harvesting are located in the eastern portion of Tulare County in the Sequoia National Forest. Hardwoods found in the Sequoia National Forest are occasionally harvested for fuel wood, in addition to use for timber production. Since most of the timberlands are located in Sequoia National Forest, the U.S. Forest Service has principal jurisdiction, which encompasses over 3 million acres. The U.S. Forest Service leases these federal lands for timber harvests."[24]

As the proposed Project is located on the Valley floor, there is no timberland or forest in the Project vicinity.

[21] California Department of Conservation, Division of Land Resource Protection, "Williamson Act Status Report (2010)" downloaded from "Williamson Act Reports and Statistics", at: http://www.conservation.ca.gov/dlrp/lca/stats_reports/Pages/index.aspx
[22] Tulare County Land Use Conversion Tables 2008-2010, 2010-2012, and 2012-2014. Table A-44, Part III. http://www.conservation.ca.gov/dlrp/fmmp/Pages/Tulare.aspx. Accessed September 20, 2017.
[23] Tulare County General Plan 2030 Update Recirculated Draft EIR (SCH # 2006041162). Page 3.10-6. And, Tulare County General Plan 2030 Update Background Report. Page 4-25.
[24] Ibid. 4-20.

REGULATORY SETTING

Federal Agencies & Regulations

Federal Farmland Protection Act (FFPA)

"The FFPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland… Projects are subject to FFPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency."[25]

U.S. Forest Service

"The U.S. Department of Agriculture Forest Service is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is also the largest forestry research organization in the world, and provides technical and financial assistance to state and private forestry agencies. Gifford Pinchot, the first Chief of the Forest Service, summed up the purpose of the Forest Service—"to provide the greatest amount of good for the greatest amount of people in the long run.""[26]

State Agencies & Regulations

California Environmental Quality Act and Guidelines Implementing the Act

The *CEQA Guidelines* Section 15382 defines "significant effect on the environment" as: "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 significance." CEQA Guidelines Appendix G Environmental Checklist Form identifies subpart "II. Agricultural and Forest Resources" as one of 17 topical issues to be addressed in environmental assessment documents.

California Department of Conservation: Farmland Mapping and Monitoring Program

"The California Department of Conservation (DOC), under the Division of Land Resource Protection, has developed the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the state's farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount

[25] United States Department of Agriculture, Natural Resources Conservation Service. Federal Farmland Protection Act, http://www.nrcs.usda.gov/wps/portal/nrcs/detail/?cid=nrcs143_008275. Accessed September 19, 2017.
[26] U.S. Forest Service, "About Us – Meet the Forest Servicehttp://www.fs.fed.us/about-agency/meet-forest-service and About the Agency, http://www.fs.fed.us/about-agency. Accessed September 19, 2017

of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the "Important Farmland Series Maps" every two years."[27]

Williamson Act: California Land Conservation Act of 1965

"The California Land Conservation Act (CLCA) of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the "Williamson Act", enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act of 1971."[28]

California Department of Forestry and Fire Protection (CAL FIRE)

"CAL FIRE manages eight Demonstration State Forests that provide for commercial timber production, public recreation, and research and demonstration of good forest management practices. CAL FIRE foresters can be found in urban areas working to increase the number of trees planted in our cities, or preventing the spread of disease by identifying and removing infected trees. A Native American burial ground in the path of a logging operation or fire may be verified and saved due to a CAL FIRE archaeologist's review of the area. And, an improved strain of trees, resistant to disease and pests, may be nurtured and introduced by a CAL FIRE forester."[29]

Local Policies & Regulations

Tulare County General Plan Policies

The Tulare County General Plan 2030 Update has a number of policies that apply to projects within the County of Tulare. General Plan policies that relate and are generally applicable to the Project are listed below:

AG-1.1 Primary Land Use - The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture's real contribution to the conservation of open space and natural resources.

AG-1.3 Williamson Act - The County should promote the use of the California Land Conservation Act (Williamson Act) on all agricultural lands throughout the County located outside established UDBs. However, this policy carries with it a caveat that support for the Williamson Act as a tax

[27] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 4-14.
[28] Ibid. 4-15 and 4-16.
[29] California Department of Forestry and Fire Protection, About Cal Fire, http://www.fire.ca.gov/about/about.php. Accessed September 19, 2017.

reduction component is premised on continued funding of the State subvention program that offsets the loss of property taxes.

AG-1.5 Substandard Williamson Act Parcels - The County may work to remove parcels that are less than 10 acres in Prime Farmland and less than 40 Acres in Non-Prime Farmland from Williamson Act Contracts (Williamson Act key term for Prime/Non-Prime).

AG-1.6 Conservation Easements - The County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including "Important Farmlands"), as defined in this Element. This program may require payment of an in-lieu fee sufficient to purchase a farmland conservation easement, farmland deed restriction, or other farmland conservation mechanism as a condition of approval for conservation of important agricultural land to non-agricultural use. If available, the ACEP shall be used for replacement lands determined to be of statewide significance (Prime or other Important Farmlands), or sensitive and necessary for the preservation of agricultural land, including land that may be a part of a community separator as part of a comprehensive program to establish community separators. The in-lieu fee or other conservation mechanism shall recognize the importance of land value and shall require equivalent mitigation.

AG-1.7 Preservation of Agricultural Lands - The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth Management Plan or similar types of strategies and the identification of growth boundaries for all urban areas located in the County.

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

IMPACT EVALUATION

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest

carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Preferred/Proposed Project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?

Project Impact Analysis: ***No Impact***

The proposed Project area consists of the developed areas within the unincorporated community of Traver; and within existing rural and semi-rural County rights-of-way consisting of paved roadways and dirt/gravel shoulders. As such, productive agricultural land would not be impacted. Wastewater treatment process improvements will take place at the existing WWTP in areas currently within and owned by the County. The areas within the WWTP are devoid of agricultural uses. Also, short-term, temporary equipment or materials staging areas on lands which are already devoid of agricultural uses would also be used. As such, agricultural land would not be impacted by this phase of construction-related activities. Construction of the pipelines would not result in the conversion of agriculturally productive lands to non-agricultural uses. Therefore, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on the Statewide FMMP map provided by the California Department of Conservation.

As noted earlier, since the pipeline (and potential lift stations) component of the Project would be constructed within existing road rights-of-way and other vacant lands, the Project would not result in any cumulative conversion of farmland to a non-agricultural use. As noted earlier, wastewater treatment process improvements will take place at the existing WWTP in areas currently within and owned by the County. The areas within the WWTP are devoid of agricultural uses. Therefore, ***No Cumulative Impact*** will occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item will occur.

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

Project Impact Analysis: ***No Impact***

While some of the surrounding properties are under Williamson Act Contracts, the Project would be constructed within existing road rights-of-way or within the existing WWTP footprint. Therefore, the Project would not result in conflicts with existing agricultural zones or Williamson Act contracted lands; as such, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the entire State of California. This cumulative analysis is based on provisions of the California Land Conservation Act of 1965 (Williamson Act) and on Tulare County allowed uses in agricultural zones.

While some of the surrounding properties are under Williamson Act Contracts, the Project would be constructed within existing road rights-of-way or within the existing WWTP footproint. Therefore, the Project would not result in cumulative conflicts with existing agricultural uses or Williamson Act contracted lands and ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

There are no forests or timberlands located on or near the proposed Project area. Therefore, ***No Project-specific Impacts*** to forests, timberlands or related zoning would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

There are no forests or timberlands located on or near the Project area. The proposed pipeline would be constructed within existing road rights-of-way and treatment process improvements would take place at the existing WWTP. Therefore, ***No Cumulative Impacts*** to forests, timberlands or related zoning would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

As noted earlier, the Project area is not located within a forest land zone or will require the change of a forest land zone. As such, ***No Project-specific Impacts*** to this Checklist Item would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project would not be located within a forest land zone or would not require the change of a forest land zone. As such, ***No Cumulative Impacts*** to this Checklist Item would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?

Project Impact Analysis: ***No Impact***

Since the Project would be constructed within existing road rights-of-way and within the existing WWTP footprint, the Project would not result in the conversion of farmland or forestland. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project would be constructed within existing road rights-of-way and the existing WWTP footprint. Therefore, ***No Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** to this Checklist Item would occur.

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Air Quality
Chapter 3.3

SUMMARY OF FINDINGS

Based on the impact analysis below, potential impacts to air quality as a result of the Preferred/ Proposed Project are determined to be ***Less Than Significant***. Air quality impacts from the Project have been compared to a similar project (Plainview Wastewater System Project or Plainview) in Tulare County that were estimated using the Sacramento Metropolitan Air Quality Management District's Roadway Construction Emissions Model Version 7.1.5.1 (which is the preferred model for estimating emissions from linear construction projects) and is included as **Appendix "A".** As this Project is approximately 44% the size of Plainview's (and the Plainview project did not exceed any air quality thresholds), it is reasonable to conclude that a less than significant impact would occur. Also, the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "A", *"Air Quality Analysis Report Traver Community Plan"* prepared by First Carbon Solutions is incorporated by reference. The impact determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Air Quality. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2(a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The

subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

The environmental setting provides a description of the Air Quality in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County General Plan 2030 Update (General Plan), Tulare County General Plan 2030 Update Background Report (Background Report), and/or Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR) incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. The following are potential thresholds for significance.

- Result in an exceedance of criteria pollutants as established in the 1990 Clean Air Act amendments.
- Result in an exceedance of San Joaquin Valley Unified Air Pollution Control District criteria pollutant threshold.
- Result in nuisance odors.
- Result in emissions of toxic air contaminants (TAC).
- 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.

ENVIRONMENTAL SETTING

San Joaquin Valley Air Basin (SJVAB)

"Tulare County falls within the southern portion of the San Joaquin Valley Air Basin (SJVAB), which is bordered on the east by the Sierra Nevada range, on the west by the Coast Ranges, and on the south by the Tehachapi Mountains. These features restrict air movement through and out of the SJVAB.

The topography of Tulare County significantly varies in elevation from its eastern to western borders, which results in large climatic variations that ultimately affect air quality. The western

[1] CEQA Guidelines, Section 15126.2(a).

portion of the County is within the low-lying areas of the SJVAB. This portion of the County is much dryer in comparison to the eastern portion that is located on the slopes of the Sierra Nevada Mountains. The higher elevation contributes to both increased precipitation and a cooler climate.

Wind direction and velocity in the eastern section varies significantly from the western portion of the County. The western side receives northwesterly winds. The eastern side of the County exhibits more variable wind patterns, but the wind direction is typically up-slope during the day and down-slope in the evening. Generally, the wind direction in the eastern portion of the County is westerly; however terrain differences can create moderate directional changes. "[2]

Generally, the temperature of air decreases with height, creating a gradient from warmer air near the ground to cooler air at elevation. This gradient of cooler air over warm air is known as the environmental lapse rate. Inversions occur when warm air sits over cooler air, trapping the cooler air near the ground. These inversions trap pollutants from dispersing vertically and the mountains surrounding the San Joaquin Valley trap the pollutants from dispersing horizontally. Strong temperature inversions occur throughout the Basin in the summer, fall, and winter. Daytime temperature inversions occur at elevations of 2,000 to 2,500 feet above the San Joaquin Valley floor during the summer and at 500 to 1,000 feet during the winter. The result is a relatively high concentration of air pollution in the valley during inversion episodes. These inversions cause haziness, which in addition to moisture may include suspended dust, a variety of chemical aerosols emitted from vehicles, particulates from wood stoves, and other pollutants. In the winter, these conditions can lead to carbon monoxide "hotspots" along heavily traveled roads and at busy intersections. During summer's longer daylight hours, stagnant air, high temperatures, and plentiful sunshine provide the conditions and energy for the photochemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOx), which results in the formation of ozone.

"The SJVAB is highly susceptible to pollutant accumulation over time due to the transport of pollutants into the SJVAB from upwind sources. Stationary emission sources in the County include the use of cleaning and surface coatings and industrial processes, road dust, local burning, construction/demolition activities, and fuel combustion. Mobile emissions are primarily generated from the operation of vehicles. According to air quality monitoring data, the SJVAB has been in violation for exceeding ozone and PM10 emission standards for many years."[3] As of December 2015, the SJVAB is in nonattainment for federal and state ozone and $PM_{2.5}$ standards, attainment for federal PM_{10} standards, and nonattainment for state PM_{10} standards.

[2] Tulare County General Plan 2030 Update RDEIR. Page 3.3-9.
[3] Ibid.

Existing Conditions Overview

"Unlike other air basins in California, the pollution in the San Joaquin Valley Air Basin (SJVAB) is not produced by large urban areas. Instead, emissions are generated by many moderate sized communities and rural uses. Emission levels in the Central Valley have been decreasing overall since 1990. This can be primarily attributed to motor vehicle emission controls that reduce the amount of vehicle emissions and controls on industrial/stationary sources. In spite of these improvements, the San Joaquin Valley is still identified as having some of the worst air quality in the nation.

The main source of CO and NO_x emissions is motor vehicles. The major contributors to ROG emissions are mobile sources and agriculture. ROG emissions from motor vehicles have been decreasing since 1985 due to stricter standards, even though the vehicle miles have been increasing. Stationary source regulations implemented by the SJVAPCD have also substantially reduced ROG emissions. ROG from natural sources (mainly from trees and plants) is the largest source of this pollutant in Tulare County. Atmospheric modeling accomplished for recent ozone planning efforts has found that controlling NO_x is more effective at reducing ozone concentrations than controlling ROG. However, controls meeting RACT and BACT are still required for SJVAPCD plans.

The SJVAB has been ranked the 2nd worst in the United States for O_3 levels, even though data shows that overall O_3 has decreased between 1982 and 2001.

Direct PM10 emissions have decreased between the years 1975 and 1995 and have remained relatively constant since 2000. The main sources of PM_{10} in the SJVAB are from vehicles traveling on unpaved roads and agricultural activities. Regional Transportation Planning Agencies must implement BACM for sources of fine particulate matter (PM10) to comply with federal attainment planning requirements for PM10."[4]

SJVAB Attainment Status

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." The federal non-attainment designation is subdivided into five categories (listed in order of increasing severity): marginal, moderate, serious, severe, and extreme. The degree of an area's non-attainment status reflects the extent of the pollution and the expected time period required in order to achieve attainment.

Designated non-attainment areas are generally subject to more stringent review by CARB and EPA. In the endeavor to improve air quality to achieve the standards, projects are subject to more stringent pollution control strategies and requirements for mitigation measures (such as mobile source reduction measures). If the National Ambient Air Quality Standards (NAAQS) are not

[4] Tulare County 2030 General Plan 2030 Update, Part 1 Goals and Policies Report. Pages 9-4 to 9-5.

achieved within the specified timeframe, federal highway funding penalties (and a federally administered implementation plan incorporating potentially harsh measures to achieve the NAAQS) will result.

Table 3.3-1 identifies the current federal and state attainment designations for the SJVAB while **Table 3.3-2** summarizes the ambient air quality standards from which the federal and state attainment status are derived. **Table 3.3-3** summarizes the common sources, health effects, and methods for prevention and control of criteria pollutant emissions.

Table 3.3-1
SJVAB Attainment Status

	Designation Classification	
Pollutant	**Federal Standards**	**State Standards**
Ozone – one hour	No Federal Standard[1]	Nonattainment/Severe
Ozone – eight hour	Nonattainment/Extreme[2]	Nonattainment
PM_{10}	Attainment[3]	Nonattainment
$PM_{2.5}$	Nonattainment[4]	Nonattainment
CO	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Vinyl Chloride	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

1 Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. However, EPA had previously classified the SJVAB as extreme nonattainment for this standard. Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.
2 Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010)
3 On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM_{10} National Ambient Air Quality Standard (NAAQS) and approved the PM_{10} Maintenance Plan.
4 The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

Source: San Joaquin Valley Unified Air Pollution Control District website accessed at: http://www.valleyair.org/aqinfo/attainment.htm.

Table 3.3-2
State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		-		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	---	---	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15.0 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	---	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 µg/m^3 (10 mg/m^3)	---	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		---	---	
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemilumi-nescence	100 ppb (188 µg/m^3)	Same as Primary Standard	Gas Phase Chemilumi-nescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)		
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	---	Ultraviolet Flourescence; Spectrophoto-metry (Pararo-saniline Method)
	3 Hour	---		---	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)	---	
	Annual Arithmetic Mean	---		0.030 ppm (for certain areas)	---	
Lead	30 Day Average	1.5 µg/m^3	Atomic Absorption	---	---	High Volume Sampler and Atomic Absorption
	Calendar Quarter	---		1.5 µg/m^3 (for certain areas)	Same as Primary Standard	

Table 3.3-2
State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards		
		Concentration	Method	Primary	Secondary	Method
	Rolling 3-Month Average	---		0.15 µg/m^3		
Visibility Reducing Particles	8 Hour	ARB converted visibility standards to instrumental equivalents in 1989	Beta Attenuation and Transmittance through Filter Tape	**No National Standards**		
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: California Air Resources Board website accessed at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Table 3.3-3
Air Pollutant Sources, Effects and Control

Pollutant	Sources	Effects	Prevention and Control
Ozone (O_3)	Formed when reactive organic gases (ROG) and nitrogen oxides react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Breathing Difficulties, Lung Tissue Damage, Damage to Rubber and Some Plastics	Reduce motor vehicle reactive organic gas (ROG) and nitrogen oxide emissions through emissions standards, reformulated fuels, inspections programs, and reduced vehicle use. Limit ROG emissions from commercial operations and consumer products. Limit ROG and NOx emissions from industrial sources such as power plants and refineries. Conserve energy.
Respirable Particulate Matter (PM_{10})	Road Dust, Windblown Dust (Agriculture) and Construction (Fireplaces) Also formed from other pollutants (acid rain, NOx, SOx, organics). Incomplete combustion of any fuel.	Increased Respiratory Disease, Lung Damage, Cancer, Premature Death, Reduced Visibility, Surface Soiling	Control Dust Sources, Industrial Particulate Emissions, Wood Burning Stoves and Fireplaces Reduce secondary pollutants which react to form PM_{10}. Conserve energy.
Fine Particulate Matter ($PM_{2.5}$)	Fuel Combustion in Motor Vehicles, Equipment and Industrial Sources, Residential and Agricultural Burning. Also formed from reaction of other pollutants (acid rain, NOx, SOx, organics).	Increases Respiratory Disease, Lung Damage, Cancer, Premature Death, Reduced Visibility, Surface Soiling	Reduces Combustion Emissions from Motor Vehicles, Equipment, Industries and Agriculture and Residential Burning. Precursor controls, like those for ozone, reduce fine particle formation in the atmosphere.

Table 3.3-3
Air Pollutant Sources, Effects and Control

Pollutant	Sources	Effects	Prevention and Control
Carbon Monoxide (CO)	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Chest Pain in Heart Patients, Headaches, Reduced Mental Alertness	Control motor vehicle and industrial emissions. Use oxygenated gasoline during winter months. Conserve energy.
Nitrogen Dioxide (NO_2)	See Carbon Monoxide	Lung Irritation and Damage. Reacts in the atmosphere to form ozone and acid rain	Controls motor vehicle and industrial combustion emissions. Conserve energy.
Lead	Metal Smelters, Resource Recovery, Leaded Gasoline, Deterioration of Lead Paint	Learning Disabilities, Brain and Kidney Damage	Control metal smelters, no lead in gasoline. Replace leaded paint with non-lead substitutes.
Sulfur Dioxide (SO_2)	Coal or Oil Burning Power Plants and Industries, Refineries, Diesel Engines	Increases lung disease and breathing problems for asthmatics. Reacts in the atmosphere to form acid rain.	Reduces the use of high sulfur fuels (e.g., use low sulfur reformulated diesel or natural gas). Conserve energy.
Visibility Reducing Particles	See $PM_{2.5}$	Reduces visibility (e.g., obscures mountains and other scenery), reduced airport safety, lower real estate value, discourages tourism.	See $PM_{2.5}$
Sulfates	Produced by the reaction in the air of SO_2 (see SO_2 sources), a component of acid rain.	Breathing Difficulties, Aggravates Asthma, Reduced Visibility	See SO_2
Hydrogen Sulfide	Geothermal Power Plants, Petroleum Production and Refining, Sewer Gas	Nuisance Odor (Rotten Egg Smell), Headache and Breathing Difficulties (Higher Concentrations)	Control emissions from geothermal power plants, petroleum production and refining, sewers, sewage treatment plants.

Source: California Air Resources Board website accessed at: http://www.arb.ca.gov/research/health/fs/fs2/fs2.htm.

Air Quality Conditions in Tulare County

Tulare County lies within the southern portion of the SJVAB. Topography and climate are unusually favorable for the development of air pollution, especially in the southern portion of the air basin where pollutants build up against the Tehachapi Mountains. Due to the SJVAB's light wind patterns, long periods of warm and sunny days, and surrounding mountains, air quality problems can occur at any time of the year.

Existing local air quality conditions can be characterized by reviewing air pollution concentration data near the Project area for comparison with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Air samples are collected continuously for some pollutants and periodically for other pollutants depending on the type of

monitoring equipment installed. Monitoring sites are usually chosen to be representative of the emissions in a community. There are currently 36 air monitoring stations in the SJVAB. Of these, there are currently five stations in Tulare County: Porterville; Sequoia National Park–Ash Mountain; Sequoia National Park–Lower Kaweah; Visalia–Church; and Visalia–Airport. However, CO and SO_2 are not collected in these five stations, so the next closest monitor with those emissions must be identified.

For the purposes of background data and this air quality assessment, this analysis relied on data collected in the last three years for the CARB monitoring stations that are located in the closest proximity to the Project site. **Table 3.3-4** provides the background concentrations for ozone, particulate matter of 10 microns (PM_{10}), particulate matter of less than 2.5 microns ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_x), sulfur dioxide (SO_2), and lead (Pb) as of July 2015. Since each monitoring site does not monitor all criteria pollutants information is provided from three separate monitoring sites, Fresno – 1st Street, Visalia – N Church Street, and Porterville – 1839 Newcomb St. monitoring stations for 2012 through 2014. No data is available for hydrogen sulfide, vinyl chloride or other toxic air contaminants in Tulare County or any nearby counties.

Based on the air monitoring data from these three stations two measured air pollutants, ozone and particulate matter, have generally exceeded state air quality standards. The amount over the standards and the number of days each year that the standards were exceeded provide an indicator of the severity of the air quality problems in the local area.

Table 3.3-4
Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2012	2013	2014
Ozone (O_3) [1]	1-hour	Max 1-hour (ppm)	0.102	0.112	0.085
		Days > State Standard (0.09 ppm)	10	5	0
	8-hour	State Max 8-hour (ppm)	0.092	0.104	0.075
		Days > State Standard (0.07 ppm)	80	52	5
		National Max 8-hour (ppm)	0.092	0.103	0.074
		Days > National Standard (0.075 ppm)	44	23	0
Inhalable coarse particles (PM_{10}) [2]	Annual	Annual Average (µg/m^3)	38.1	44.5	ID
	24 hour	State 24-hour (µg/m^3)	76.2	160.0	104.2
		Days > State Standard (50 µg/m3)	15	16	17
		National 24-hour (µg/m^3)	75.7	155.0	102.4
		Days > National Standard (150 µg/m^3)	0	1	0
Fine particulate matter ($PM_{2.5}$) [2]	Annual	Annual Average (µg/m^3)	14.7	18.9	17.8
	24-hour	24-hour (µg/m^3)	76.2	124.2	81.3
		Days > National Standard (35 µg/m^3)	7	14	12

Table 3.3-4
Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2012	2013	2014
Carbon monoxide (CO) [3]	8-hour	Max 8-hour (ppm)	2.22	ID	ID
		Days > State and National Standards (9 ppm)	0	0	0
Nitrogen dioxide (NO_2) [2]	Annual 1-hour	Annual Average (ppm)	12	12	10
		Max 1-hour (ppm)	61.0	62.3	64.5
		Days > State Standard (0.18 ppm)	0	0	0
		Days > National Standard (100 ppb)	0	0	0
Sulfur dioxide (SO_2) [3, 4]	Annual	Annual Average (ppm)	ID	ID	ID
	24-hour	Max 24-hour (ppm)	0.004	ID	ID

Abbreviations: ppm = parts per million; > = exceeded; µg/m³= micrograms per cubic meter; ID = insufficient data; max = maximum

State Standard = CAAQS; National Standard = NAAQS

[1] data from Porterville station
[2] data from Visalia-Church station
[3] data from Fresno-First station
[4] data shown is for period 2011-2013 as data for 2014 is not available

Source: ARB website http://www.arb.ca.gov/adam/topfour/topfour1.php, accessed September 24, 2015

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy to understand measure of health impact compared to concentrations in the air. As the SJVAB is in nonattainment at the federal level for ozone and PM2.5, the discussion below includes only those emissions with respect to the AQI. **Table 3.3-5** and **Table 3.3-6** provide a description of the health impacts of ozone and $PM_{2.5}$, respectively, at different concentrations.

Table 3.3-5
Air Quality Index and Health Effects of Ozone

Air Quality Index/ Ozone Concentration	Health Effects Description
AQI 0-50 – Good	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 0-59 ppb	Health Effects Statements: None
	Cautionary Statements: None

Table 3.3-5
Air Quality Index and Health Effects of Ozone

Air Quality Index/ Ozone Concentration	Health Effects Description
AQI 51-100 – Moderate	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 60-75 ppb	Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 101-150 – Unhealthy for Sensitive Groups	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 76-95 ppb	Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI 151-200 – Unhealthy	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 96-115 ppb	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI 201-300 – Very Unhealthy	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 116-374 ppb	Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
AQI 301-500 – Hazardous*	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration ≥405 ppb	Health Effects Statements: Severe respiratory effects and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasingly severe respiratory effects likely in general population.
	Cautionary Statements: Everyone should avoid all outdoor exertion.

Table 3.3-5
Air Quality Index and Health Effects of Ozone

Air Quality Index/ Ozone Concentration	Health Effects Description
* AQI 300-500 are calculated using 1-hr ozone data (under 1-hr ozone concentrations 375-404 ppb are identified as Very Unhealthy)	
Sources: EPA websites, accessed at http://www.airnow.gov/index.cfm?action=aqibasics.aqi, http://www.airnow.gov/index.cfm?action=resources.aqi_conc_calc, and http://www.airnow.gov/index.cfm?action=resources.conc_aqi_calc.	

Table 3.3-6
Air Quality Index and Health Effects of $PM_{2.5}$

Air Quality Index/ PM 2.5 Concentration	Health Effects Description
AQI 0-50 – Good	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
Concentration 0-12.0 µg/m^3	Health Effects Statements: None
	Cautionary Statements: None
AQI 51-100 – Moderate	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
Concentration 12.1-35.4 µg/m^3	Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
	Cautionary Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
AQI 101-150 – Unhealthy for Sensitive Groups	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
Concentration 35.5-55.4 µg/m^3	Health Effects Statements: Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly.
	Cautionary Statements: People with respiratory or heart disease, the elderly and children should limit prolonged exertion.
AQI 151-200 – Unhealthy	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
Concentration 55.5-150.4 µg/m^3	Health Effects Statements: Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; increased respiratory effects in general population.
	Cautionary Statements: People with respiratory or heart disease, the elderly and children should avoid prolonged exertion; everyone else should limit prolonged exertion.
AQI 201-300 – Very Unhealthy	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.

Table 3.3-6
Air Quality Index and Health Effects of $PM_{2.5}$

Air Quality Index/ $PM_{2.5}$ Concentration	Health Effects Description
Concentration 150.5-250.4 µg/m^3	Health Effects Statements: Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; significant increase in respiratory effects in general population.
	Cautionary Statements: People with respiratory or heart disease, the elderly and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.
AQI 301-500 – Hazardous*	Sensitive Groups: People with respiratory or heart disease, the elderly and children are the groups most at risk.
Concentration ≥250.5 µg/m^3	Health Effects Statements: Serious aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; serious risk of respiratory effects in general population.
	Cautionary Statements: Everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly and children should remain indoors.

Source: EPA websites, accessed at http://www.airnow.gov/index.cfm?action=aqibasics.aqi, http://www.airnow.gov/index.cfm?action=resources.aqi_conc_calc, and http://www.airnow.gov/index.cfm?action=resources.conc_aqi_calc.

Based on the AQI scale for the 8-hour ozone standard, the nearest monitoring station in Porterville experienced at least three days in the last three years that would be categorized as unhealthful (AQI 151-200), and as many as 80 days that were unhealthful for sensitive groups (AQI 101-150) or moderate (AQI 50-100). The highest reading for the 8-hour standard was 104 ppb in 2013 and the highest reading for the 1-hour ozone standard 112 ppb in 2013. These values are higher than the 95-ppb cut off point for unhealthful for sensitive groups (AQI 101-150), but lower than the 115-ppb cut off point for unhealthy (AQI 151-200). Active children and adults, and people with respiratory disease should avoid prolonged outdoor exertion when the AQI is at this level.

An AQI of 51-100 for $PM_{2.5}$ is considered moderate and would be triggered by a 24-hour average concentration of 35.4 µg/m^3, which is considered an exceedance of the federal $PM_{2.5}$ standard. The monitoring station in Visalia exceeded the standard up to 14 days in one year over the last three years. People with respiratory or heart disease, the elderly and children are the groups most at risk. An unhealthy AQI (AQI 151-200) was also exceeded on at least three days in the last three years. The highest concentration recorded was 124.2 µg/m^3 in 2013. At this concentration, increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly and increased respiratory effects in general population would occur. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion when the AQI exceeds this level.

REGULATORY SETTING

Federal Agencies & Regulations

Federal Clean Air Act

"The Federal Clean Air Act (CAA), adopted in 1970 and amended twice thereafter (including the 1990 amendments), establishes the framework for modern air pollution control. The act directs the Environmental Protection Agency (EPA) to establish ambient air standards, the National Ambient Air Quality Standards (NAAQS)… for six pollutants: ozone, carbon monoxide, lead, nitrogen dioxide, particulate matter (less than 10 microns in diameter [PM_{10}] and less than 2.5 microns in diameter [$PM_{2.5}$]), and sulfur dioxide. The standards are divided into primary and secondary standards; the former are set to protect human health with an adequate margin of safety and the latter to protect environmental values, such as plant and animal life.

Areas that do not meet the ambient air quality standards are called "non-attainment areas". The Federal CAA requires each state to submit a State Implementation Plan (SIP) for non-attainment areas. The SIP, which is reviewed and approved by the EPA, must demonstrate how the federal standards will be achieved. Failing to submit a plan or secure approval could lead to the denial of federal funding and permits for such improvements as highway construction and sewage treatment plants. For cases in which the SIP is submitted by the State but fails to demonstrate achievement of the standards, the EPA is directed to prepare a federal implementation plan or EPA can "bump up" the air basin in question to a classification with a later attainment date that allows time for additional reductions needed to demonstrate attainment, as is the case for the San Joaquin Valley.

SIPs are not single documents. They are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations and federal controls. The California SIP relies on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. California State law makes the California Air Resources Board (CARB) the lead agency for all purposes related to the SIP. Local Air Districts and other agencies, such as the Bureau of Automotive Repair and the Department of Pesticide Regulation, prepare SIP elements and submit them to CARB for review and approval. The CARB forwards SIP revisions to the EPA for approval and publication in the Federal Register."[5]

State Agencies & Regulations

California Clean Air Act

"The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards (see Table 3.3-1 [of the General Plan RDEIR]), which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards.

[5] Tulare County General Plan 2030 Update REIR. Pages 3.3-1 to 3.3-2.

Responsibility for meeting California's standards is addressed by the CARB and local air pollution control districts (such as the eight county AIR DISTRICT, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans.

The California CAA requires that Air Districts prepare an air quality attainment plan if the district violates State air quality standards for criteria pollutants including carbon monoxide, sulfur dioxide, nitrogen dioxide, $PM_{2.5}$, or ozone. Locally prepared attainment plans are not required for areas that violate the State PM_{10} standards. The California CAA requires that the State air quality standards be met as expeditiously as practicable but does not set precise attainment deadlines. Instead, the act established increasingly stringent requirements for areas that will require more time to achieve the standards."[6]

"The air quality attainment plan requirements established by the California CAA are based on the severity of air pollution caused by locally generated emissions. Upwind air pollution control districts are required to establish and implement emission control programs commensurate with the extent of pollutant transport to downwind districts."[7]

California Air Resources Board

"The CARB is responsible for establishing and reviewing the State ambient air quality standards, compiling the California State Implementation Plan (SIP) and securing approval of that plan from the U.S. EPA. As noted previously, federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop SIPs. SIPs are comprehensive plans that describe how an area will attain NAAQS. The 1990 amendments to the Federal CAA set deadlines for attainment based on the severity of an area's air pollution problem. State law makes CARB the lead agency for all purposes related to the SIP. The California SIP is periodically modified by the CARB to reflect the latest emission inventories, planning documents, and rules and regulations of various air basins. The CARB produces a major part of the SIP for pollution sources that are statewide in scope; however, it relies on the local Air Districts to provide emissions inventory data and additional strategies for sources under their jurisdiction. The SIP consists of the emission standards for vehicular sources and consumer products set by the CARB, and attainment plans adopted by the local air agencies as approved by CARB. The EPA reviews the air quality SIPs to verify conformity with CAA mandates and to ensure that they will achieve air quality goals when implemented. If EPA determines that a SIP is inadequate, it may prepare a Federal Implementation Plan for the nonattainment area, and may impose additional control measures.

In addition to preparation of the SIP, the CARB also regulates mobile emission sources in California, such as construction equipment, trucks, automobiles, and oversees the activities of air quality management districts and air pollution control districts, which are organized at the county or regional level. The local or regional Air Districts are primarily responsible for regulating

[6] Ibid. 3.3-2 to 3.3-3.
[7] Op. Cit. 3.3-5.

stationary emission sources at industrial and commercial facilities within their jurisdiction and for preparing the air quality plans that are required under the Federal CAA and California CAA."[8]

California Air Resources Board Airborne Toxic Control Measures

"Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." In 1998, following a 10-year scientific assessment process, ARB identified diesel PM as a toxic air contaminant based on its potential to cause cancer and other health problems, including respiratory illnesses, and increased risk of heart disease. Subsequent to this action, research has shown that diesel PM also contributes to premature deaths. Health risks from diesel PM are highest in areas of concentrated emissions, such as near ports, railyards, freeways, or warehouse distribution centers. Exposure to diesel PM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems.

Both private businesses and public agencies operating stationary prime and emergency standby diesel engines in California are subject to the ATCM. Emergency standby engines are those that are used only when normal power or natural gas service fails or when needed for fire suppression or flood control. Prime engines are those that are not used for emergency standby purposes. Examples of businesses that are affected include private schools and universities, private water treatment facilities, hospitals, power generation, communications, broadcasting, building owners, agricultural production, banks, hotels, refiners, resorts, recycling centers, quarries, wineries, dairies, food processing, and manufacturing entities. A variety of public agencies are also affected including military installations, prisons and jails, public schools and universities, and public water and wastewater treatment facilities."[9]

"The ATCM for stationary diesel engines was originally adopted by the Air Resources Board (ARB or Board) at the February 26, 2004, Board Hearing. On November 8, 2004, the Final Regulation Order for the ATCM was approved by the Office of Administrative Law (OAL) and filed with the Secretary of State. The rulemaking became effective December 8, 2004. Among other provisions, the ATCM established emission standards and fuel use requirements for new and in-use stationary engines used in prime and emergency back-up applications (non-agricultural) and for new stationary engines used in agricultural applications.

A modification of the 2004 action was necessary to address the required PM emission standard for new agricultural engines. Therefore, an Emergency Regulatory Amendment was heard at the March 17, 2005 Board Hearing. On April 4, 2005, the Office of Administrative Law approved the amendments to the ATCM which removed the requirement that new stationary agriculture pump engines meet the 0.15g/bhp-hr PM standard. Instead, such engines must meet the appropriate Tier 2 emissions standard. The Board approved a temporary emergency action (Resolution 05-29) to

[8] Op. Cit. 3.3-6 to 3.3-7.
[9] Frequently Asked Questions. Airborne Toxic Control Measure For Stationary Compression Ignition Engines, Requirements for Stationary Engines Use in Non-Agricultural Applications. California Air Resources Board, Stationary Source Division, Emissions Assessment Branch, May 2011. Page 2. Which can be accessed at: http://www.arb.ca.gov/diesel/documents/atcmfaq.pdf.

replace the 0.15 g/bhp-hr PM standard for these engines with the appropriate ARB and federal new off-road/nonroad engine certification standards. Following this emergency rulemaking proceeding, ARB conducted another rulemaking in accordance with all procedural requirements of the California Administrative Procedure Act to make a modified version of the emergency amendments permanent at the May 26, 2005 Board Hearing. The final rulemaking package was approved by OAL and filed with the Secretary of the State on September 9, 2005. The regulation became effective that same day.

In November 2006, the Board approved amendments to the ATCM to include requirements for stationary in-use agricultural engines. Additional amendments addressed implementation and compliance issues primarily involving non-agricultural emergency standby and prime engines. These issues included streamlining certain fuel reporting requirements, updating electricity tariff schedules, modifying the definitions of California (CARB) diesel fuel and alternative diesel fuel, an alternative compliance demonstration option to the 0.01 g/bhp-hr diesel PM standard, and a "sell-through" provision to allow stationary diesel-fueled engine wholesalers and retailers to sell (and owners or operators to use) stock engines that do not meet new, more stringent emissions standards when they become effective. The amendments also authorized the Executive Officer or local air district to allow the sale, purchase, or installation of a new stock engine from the previous model year to meet new stationary diesel-fueled engine emission standards, if verifiable information is provided documenting that current mode year engines meeting the new emission standards are not available in sufficient numbers or in a sufficient range of makes, models, and horsepower ratings. The OAL approved the amendments on September 18, 2007, which became effective October 18, 2007.

In October 2010, the Board approved amendments to the ATCM to more closely align with the emission standards for new stationary diesel-fueled emergency standby engines, including direct-drive fire pump engines, and new prime engines with the federal Standards of Performance for Stationary Compression- Ignition Internal Combustion Engines (NSPS) promulgated July 11, 2006. Amendments to help clarify provisions in the ATCM and address new information, and to remove provisions no longer needed were also approved."[10]

Regional Agencies & Regulations

San Joaquin Valley Air Pollution Control District

The San Joaquin Valley Air Pollution Control District (Air District) is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, and the San Joaquin Valley portion of Kern County.

"The Air District is a public health agency whose mission is to improve the health and quality of life for all San Joaquin Valley residents through efficient, effective and entrepreneurial air quality-management strategies." [11] The Air District's 10 core values include: protection of public health; active and effective air pollution control efforts with minimal disruption to the San Joaquin

[10] Ibid. 1 and 2.
[11] Air District website accessed at: http://www.valleyair.org/General_info/aboutdist.htm#Mission.

Valley's economic prosperity; outstanding customer service; ingenuity and innovation; accountability to the public; open and transparent public process; recognition of the uniqueness of the San Joaquin Valley; continuous improvement; effective and efficient use of public funds; and respect for the opinions and interests of all San Joaquin Valley residents. To achieve these core values the Air District has adopted air quality plans pursuant to the California CAA and a comprehensive list of rules to limit air quality impacts. The air plans currently in effect in the SJVAB and specific rules that apply to the Project are listed and described further below.

Ozone Plans[12]

"The SJVAB has severe ozone problems. The EPA has required the Air District to demonstrate in a plan, substantiated with modeling, that the ozone NAAQS could be met by the November 15, 2005 deadline. However, the district could not provide this demonstration for several reasons, including that its achievement would require regulation of certain source categories not currently under the jurisdiction of the district. According to the district, in order to meet the standard the SJVAB must reduce the total emissions inventory by an additional 30 percent (300 tons per day). Because attainment by the deadline could not be demonstrated by the mandated deadlines, the federal sanction clock was started. The clock was to be stopped if the Air District SIP could demonstrate compliance with specified federal requirements by November 15, 2005. However, the district recognized that it could not achieve demonstration in time. Therefore, the district, through petition by the State on behalf of AIR DISTRICT, sought a change in the federal nonattainment classification from "severe" to "extreme" nonattainment with the ozone standard. An extreme nonattainment designation would effectively move the compliance deadline to year 2010 before federal sanctions would begin.

On February 23, 2004, EPA publicly announced its intention to grant the request by the State of California to voluntarily reclassify the SJVAB from a "severe" to an "extreme" 1-hour ozone nonattainment area. The EPA stated that, except for a demonstration of attainment of the ozone standard by 2005, the Air District has submitted all of the required severe area plan requirements and they were deemed complete. The CARB submitted the 2004 Extreme Ozone Attainment Demonstration Plan to EPA on November 15, 2004. On August 21, 2008, the District adopted Clarifications for the 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone, and on October 16, 2008, EPA proposed to approve the District's 2004 Extreme Ozone Attainment Demonstration Plan for 1-hour Ozone."[13]

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a $29-million Clean Air Act penalty. The penalty is being collected through an additional $12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

[12] The various ozone plans can be found on the Air District's website at: http://www.valleyair.org/Air_Quality_Plans/Ozone_Plans.htm.
[13] Tulare County General Plan 2030 Update RDEIR. Pages 3.3-12 to 3.3-13.

On May 6, 2014, the District submitted a formal request that the EPA determine that the Valley has attained the federal 1-hour ozone standard and to eliminate the $29 million Clean Air Act penalty. Per federal requirements, the District's submittal includes a clean data finding (2011-2013) and a finding that attainment is due to permanent and enforceable emissions reductions.

As part of the clean data finding, the District requested EPA concurrence that an exceedance at Fresno-Drummond on August 10, 2012 was due to an exceptional event. Alternatively, the District also provided compelling evidence that the Valley would attain the 1-hour ozone standard but for the influence of international air pollutant transport, allowing nonattainment penalties to be lifted under CAA 179B.

EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NO_x and a 25-percent reduction of ROG (SJVAPCD 2007). The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Basin by 2024 as allowed for areas designated extreme nonattainment by the federal CAA.

"The County continues to evaluate and consider a variety of Federal, State, and Air District programs in order to respond to the non-attainment designation for Ozone that the SJVAB has received, and will continue to adopt resolutions to implement these programs. The Tulare County Board of Supervisor resolutions are described below. These resolutions were adopted in 2002 and 2004, respectively.

Resolution 2002-0157. Resolution 2002-0157, as adopted on March 5, 2002, requires the County to commit to implementing the Reasonably Available Control Measures included in the Resolution. The following Reasonably Available Control Measures were included in the resolution:

- Increasing transit service to the unincorporated communities of Woodville, Poplar and Cotton Center;
- Purchase of three new buses and installation of additional bicycle racks on buses;

- Public outreach to encourage the use of alternative modes of transportation;
- Providing preferential parking for carpools and vanpools;
- Removing on-street parking and providing bus pullouts in curbs to improve traffic flow;
- Supporting the purchase of hybrid vehicles for the County fleet;
- Mandating that the General Plan 2030 Update implement land use policies supporting public transit and vehicle trip reduction; and
- Programming $13,264,000 of highway widening projects.

Resolution 2004-0067. As part of a follow up effort to Resolution 2002-0157 and to address the federal reclassification to Extreme non-attainment for ozone, the County Board of Supervisors adopted Resolution 2004-067. The resolution contains additional Reasonably Available Control Measures as summarized below:

- Encouraging land use patterns which support public transit and alternative modes of transportation;
- Exploring concepts of Livable Communities as they address housing incentives and transportation;
- Consideration of incentives to encourage developments in unincorporated communities that are sensitive to air quality concerns; and
- Exploring ways to enhance van/carpool incentives, alternative work schedules, and other Transportation Demand Management strategies."[14]

Particulate Matter Plans[15]

The SJVAB was designated nonattainment of state and federal health-based air quality standards for PM_{10}. However, as discussed below, the SJVAB has demonstrated attainment of the federal PM_{10} standards and currently remains in nonattainment only for the state standards. The SJVAB is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet CAA requirements for the PM_{10} standard, the Air District adopted a PM10 Attainment Demonstration Plan (Amended 2003 PM10 Plan and 2006 PM10 Plan), which had an attainment date of 2010. The Air District adopted the 2007 PM10 Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the San Joaquin Valley as an attainment/maintenance area for PM_{10} on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were

[14] Ibid. 3.3-13.
[15] The various particulate matter plans can be found on the Air District's website at: http://www.valleyair.org/Air_Quality_Plans/PM_Plans.htm.

considered exceptional events that are not considered a violation of the standard for attainment purposes.

On April 30, 2008, the Air District adopted the 2008 PM2.5 Plan satisfying federal implementation requirements for the 1997 federal $PM_{2.5}$ standard. However, on the verge of the demonstration of attainment with the standard the SJVAB was plagued with extreme drought, stagnation, strong inversions, and historically dry conditions and could not achieve attainment by the 2015 deadlines. The 2015 Plan for the 1997 PM2.5 Standard (2015 PM2.5 Plan) was adopted by the Air District on April 16, 2015, and is a continuation of the Air District's strategy to improve the air quality in the SJVAB. The 2015 PM2.5 Plan contains stringent measures, best available control measures, additional enforceable commitments for further reductions in emissions, and ensures attainment of the 1997 federal 24-hour standard (65 µg/m³) by 2018 and the annual standard (15 µg/m³) by 2020.

In December 2012, the Air District adopted the 2012 PM2.5 Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³. The ARB approved the Air District's 2012 PM2.5 Plan for the 2006 standard at a public hearing on January 24, 2013. This plan seeks to bring the San Joaquin Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time. EPA lowered the annual $PM_{2.5}$ standard in 2012 and is in the process of completing attainment designations. The Air District continues to work with EPA on issues surrounding these plans, including EPA implementation updates.

The County continues to evaluate and consider Federal, State, and Air District programs in order to respond to the non-attainment designation for state PM10 standards that the SJVAB has received. "On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 NAAQS and approved the PM10 Maintenance Plan. However, prior to this redesignation, Tulare County Board of Supervisors adopted the following resolution (Resolution 2002-0812) on October 29, 2002. Although now designated in attainment of the federal PM10 standard, all requirements included in the AIR DISTRICT PM10 Plan are still in effect. The resolution contains the following Best Available Control Measures (BACMs) to be implemented in order to reduce PM10 emissions in the County:

- Paving or stabilizing of unpaved roads and alleys;
- Paving, vegetating, chemically stabilizing unpaved access points onto paved roads;
- Curbing, paving, or stabilizing shoulders on paved roads;
- Frequent routine sweeping or cleaning of paved roads;
- Intensive street cleaning requirements for industrial paved roads and streets providing access to industrial/ construction sites; and
- Debris removal after wind and rain runoff when blocking roadways."[16]

[16] Tulare County General Plan 2030 Update RDEIR. Page 3.3-14.

Criteria Pollutant Emissions

To assess air quality impacts, the Air District has established significance thresholds to assist Lead Agencies in determining whether a project may have a significant air quality impact[17]. The Air District's thresholds of significance for criteria pollutants, which are based on Air District Rule 2201 (New and Modified Stationary Source Review) offset thresholds, are provided in **Table 3.3-7**. As shown in the Table, the Air District has three sets of significance thresholds for each pollutant based on the source of the emissions. According to the Air District's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), "The District identifies thresholds that separate a project's short-term emissions from its long-term emissions. The short-term emissions are mainly related to the construction phase of a project and are recognized to be short in duration. The long-term emissions are mainly related to the activities that will occur indefinitely as a result of project operations."[18]

Table 3.3-7
Air Quality Thresholds of Significance – Criteria Pollutants

Pollutant/ Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non- Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
NOx	10	10	10
ROG	10	10	10
SOx	27	27	27
PM_{10}	15	15	15
$PM_{2.5}$	15	15	15

Source: Air District, GAMAQI, Table 2, page 80

Operational emissions are further separated into permitted and non-permitted equipment and activities. Stationary (permitted) sources that comply or will comply with Air District rules and regulations are generally not considered to have a significant air quality impact. Specifically, the GAMAQI states, "District Regulation II ensures that stationary source emissions will be reduced or mitigated to below the District's significance thresholds. However, the Lead Agency can, and should, make an exception to this determination if special circumstances suggest that the emissions from any permitted or exempt source may cause a significant air quality impact. For example, if a source may emit objectionable odors, then odor impacts on nearby receptors should be considered a potentially significant air quality impact. District implementation of New Source Review (NSR) ensures that there is no net increase in emissions above specified thresholds from New and

[17] Air District, Guidance for Assessing and Mitigating Air Quality Impacts. Page 74.
[18] Ibid. 75.

Modified Stationary Sources for all nonattainment pollutants and their precursors. Furthermore, in general, permitted sources emitting more than the NSR Offset Thresholds for any criteria pollutant must offset all emission increases in excess of the thresholds. However, under certain circumstances, the District may be precluded by state law or other District rule requirements from requiring a stationary source to offset emissions increases."[19]

Air District Rules and Regulations[20]

The Air District is primarily responsible for regulating stationary source emissions within the SJVAB and preparing the air quality plans (or portions thereof) for its jurisdiction. The Air District's primary approach of implementing local air quality plans occurs through the adoption of specific rules and regulations. Stationary sources within the jurisdiction are regulated by the Air District's permit authority over such sources and through its review and planning activities. The following Air District rules and regulations that may apply to this Project include, but are not limited to, the following:

Regulation VIII – Fugitive PM_{10} Prohibitions. The Air District adopted its Regulation VIII on October 21, 1993 and amended on August 8, 2004 to implement Best Available Control Measures (BACM). This Regulation consists of a series of emission reduction rules consistent with the PM_{10} Maintenance Plan. These rules are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track-out, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules. Regulation VIII specifically addresses the following activities:

- Construction, Demolition, Excavation, Extraction and Other Earthmoving Activities (Rule 8021);
- Bulk Materials (including Handling and Storage) (Rule 8031);
- Carryout and Track-Out (Rule 8041);
- Open Areas (Rule 8051);
- Paved and Unpaved Roads (Rule 8061); and
- Unpaved Vehicle/Equipment Parking (including Shipping and Receiving, Transfer, Fueling, and Service Areas) (Rule 8071).

Rule 2201 – **New and Modified Stationary Source Review.** This rule applies to all new stationary sources and all modifications to stationary sources which are subject to Air District Permit Requirements. Rule 2201 requires stationary source projects that exceed certain thresholds to install best available control technology (BACT) and to obtain emission offsets to ensure that growth in stationary sources on a cumulative basis will not result in an increase in emissions. Examples of stationary sources associated with the Project that may require District permits include, but not limited to, potential expansion of the Traver Wastewater Treatment Plant.

[19] Op. Cit. 76.
[20] For a full list of Air District rules and regulations, see their website at: http://www.valleyair.org/rules/1ruleslist.htm.

Rule 4002 – **National Emissions Standards for Hazardous Air Pollutants**. The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations to protect the health and safety of the public from HAPs, such as asbestos.

Rule 4101 – Visible Emissions. The purpose of this rule is to prohibit the emissions of visible air contaminants to the atmosphere. The provisions of this rule shall apply to any source operation which emits or may emit air contaminants.

Rule 4102 – Nuisance. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

Rule 4625 – Wastewater Separators. The purpose of this rule is to limit .VOC emissions from wastewater separators by requiring vapor loss control devices, recordkeeping, inspections and test methods.

The Air District has limited authority to regulate transportation sources and indirect sources that attract motor vehicle trips.

Rule 9510 – Indirect Source Review. This rule reduces the impact of NO_x and PM_{10} emissions from growth on the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site Air District -administered projects, or a combination of the two. The rule defines a development project as a project, or portion thereof, that results in the construction of a building or facility for the purpose of increasing capacity or activity.[21] The rule also exempts any development project on a facility whose primary functions are subject to Air District permitting requirements.[22] The Project includes the installation of infrastructure to provide existing residences without municipal sewage facilities with connection to an existing wastewater treatment plant. As such, the Project does not increase capacity or activity and upon completion will be tied into a facility subject to Air District permitting requirements; therefore, the Project is not subject to Rule 9510.

Air District's CEQA Role

As a public agency, the District takes an active part in the intergovernmental review process under CEQA. In carrying out its duties under CEQA, the District may act as a Lead Agency, a Responsible Agency, or a Trustee/Commenting Agency depending on the approvals required by the District and other land use agencies.

[21] Air District Rule 9510, Section 3.13
[22] Ibid. Section 4.4.3

"The District is always the Lead Agency for projects such as the development of District rules and regulations. The District may be Lead Agency for projects subject to District permit requirements. As discussed above, for projects triggering BACT, the District has discretionary approval in deciding how to permit the project. For projects subject to BACT, the District serves as Lead Agency when no other agency has principal responsibility for approving the project."[23]

"As a Responsible Agency, the District assists Lead Agencies by providing technical expertise in characterizing project-related impacts on air quality and is available to provide technical assistance in addressing air quality issues in environmental documents. When commenting on a Lead Agency's environmental analysis, the District reviews the air quality section of the analysis and other sections relevant to assessing potential impacts on air quality, i.e. sections assessing public health impacts. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures."[24]

"As a Trustee Agency, the District assists Lead Agencies by providing technical expertise or tools in characterizing project-related impacts on air quality and identifying potential mitigation measures, and is available to provide technical assistance in addressing air quality issues in environmental documents. At the conclusion of its review the District may submit to the Lead Agency comments regarding the project air quality analysis. Where appropriate, the District will recommend feasible mitigation measures. The process is subject to change due to the District's continuous improvements efforts." [25]

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below:

AQ-1.1 Cooperation with Other Agencies - 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 Air District, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

AQ-1.2 Cooperation with Local Jurisdictions - The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts - The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts.

[23] Air District, GAMAQI. Page 50.
[24] Ibid. 51.
[25] Op. Cit. 52.

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 Air Quality Land Use Compatibility - 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-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the AIR DISTRICT, under AB 32 (Health and Safety Code Section38501 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 determine its consistency with the emission reduction strategies.

IMPACT ANALYSIS

Will the project:

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

Project Impact Analysis: ***Less Than Significant Impact***

The following three criteria will be used for determining whether the Project will conflict with or obstruct the implementation of the applicable air quality plan (AQP):

1. Will the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQPs?
2. Will the project conform to the assumptions in the AQPs?
3. Will the project comply with applicable control measures in the AQPs?

Contribution to Air Quality Violations

The Air District's Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI) provides the following guidance on determining whether a project would conflict or obstruct implementation of the applicable air quality plan: "…the District has established thresholds of significance for criteria pollutant emissions, which are based on District New Source Review (NSR) offset requirements for stationary sources. Stationary sources in the District are subject to some of the toughest regulatory requirements in the nation. Emission reductions achieved through implementation of District offset requirements are a major component of the District's

air quality plans. Thus, projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan.""[26]

The proposed Project includes the installation of wastewater main and lateral pipelines to make a more reliable collection system and to accommodate development described in the Traver Community Plan. It also includes improvements to the existing wastewater treatment plant to provide a more reliable and efficient process.

The proposed Project would result in short-term construction-related criteria air pollutant emissions. It is not necessary to calculate air quality emission as, by analogy, the emissions from this project compared to a similar project (Plainview Wastewater System Project) within Tulare County would not exceed Air District thresholds. **Table 3.3-8** (see Checklist Item b) below), shows emissions from the Plainview Wastewater System Project's Project-related construction emissions would be below the Air District's thresholds of significance shown in **Table 3.3-7** for all criteria pollutants. As Traver Community's WWTP project would be approximately 44% the size of Plainview's, and air emissions are simple "straight-line" calculations, it is reasonable to assume that Traver Community's WWTP emissions would not exceed 44% the amount of Plainview's. Also, operational emissions associated with the Project would result from the vehicle trips associated with the maintenance of the pipelines. Maintenance trips would also be below the Air District's 1,453 trips per day Small Project Analysis Level (SPAL) limits and are, therefore, assumed to fall below the Air District's thresholds of significance.[27] Therefore, the Project would not increase the frequency or severity of existing air quality violation, nor would it cause or contribute to new violations. Therefore, the Project would result in a ***Less Than Significant Project-specific Impact*** to this Checklist Item would occur

Consistency with Assumptions in AQPs

The Air District estimates future emissions in the air basin and develops strategies required to reduce emissions through new regulations. Emissions are calculated based on population, vehicle, and development trends. A project may be inconsistent with an air quality plan if it results in population or employment growth greater than estimates in the air quality plans. Projects that propose growth greater than anticipated projections would conflict with air quality plans and may result in potentially significant impacts as a result of emissions levels in excess of established thresholds.

The proposed wastewater treatment pipeline (or improvements to the existing wastewater treatment plant to provide a more reliable and efficient process) would neither increase population nor employment beyond what was accounted for in the Traver Community Plan within the air basin as the pipeline is sized to serve the existing planned unincorporated community of Traver. Also, it is anticipated that there would be no change to County of Tulare staffing levels to maintain its operations at the Traver wastewater treatment plant (WWTP).

[26] Op. Cit. 65.
[27] Op. Cit. 85; and SPAL website http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI-SPAL.PDF.

As noted earlier, the Project remains subject to all applicable Air District rules and regulations and it has been shown that emission levels would not exceed Air District thresholds during construction-or operations-related activities. As such, the Project is consistent with the Tulare County General Plan 2030 Update, as well as the Air District's ozone and particulate matter plans which are included in the State Implementation Plan. Therefore, the Project would result in a ***Less Than Significant Project-specific Impact*** to this Checklist Item.

Control Measures

The Project consists of the installation of wastewater collection system improvements and treatment plant improvements (to provide a more reliable and efficient process). As such, the proposed Project is subject to all applicable Air District and ARB rules and regulations for construction-related activities. A Fugitive Dust Control Plan would be submitted to the Air District to comply with Regulation VIII requirements prior to the initiation of construction. Therefore, the Project would result in a ***Less Than Significant Project-specific Impact*** to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. As previously discussed, Project-related criteria pollutant emissions would not exceed Air District significance thresholds and, as such, the Project is consistent with and would not obstruct the applicable air quality attainment plan. Furthermore, the Project would comply with all applicable Air District rules and regulations. Therefore, the Project would result in a ***Less Than Significant Cumulative Impact*** related this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Project is consistent with all applicable AQPs, it would comply with required control measures, and it would not contribute substantially to an existing or projected air quality violation. Therefore, the Project would result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Project Impact Analysis: ***Less Than Significant Impact***

Typically, construction of a project generates emissions of various air pollutants, including criteria pollutants such as carbon monoxide (CO), ozone precursors (such as nitrous oxides (NO_x) and reactive organic gases (ROG) or Volatile Organic Compounds (VOC)), particulate matter (both less than 10 microns in diameter (PM_{10}) and less than 2.5 microns in diameter ($PM_{2.5}$)), as well as sulfur oxides (SO_x). For example, typical emission sources during

construction-related activities include equipment exhaust, dust from wind erosion, earthmoving activities, and vehicle movements.

To assist in evaluating impacts of project-specific air quality emissions, the Air District has adopted thresholds of significance for criteria pollutant emissions (expressed in units of tons per year (tons/yr.)) as previously presented in **Table 3.3-7,** and reiterated in **Table 3.3-8**. The following unmitigated, construction-related emissions were estimated for the Plainview Project using the Sacramento Metropolitan Air Quality Management District (Sac Metro) Roadway Construction Emissions Model (Version 7.1.5.1, December 2013, in Excel-5Mb) and reduced by forty-four percent (44%) to reflect Traver Community WWTP's project size (and subsequent construction-related activities emissions) compared with Plainview's:

Table 3.3-8
Maximum Unmitigated Project Construction-Related Emissions

Pollutant	*Plainview Project Construction Emissions (tons/yr)	Traver Community Project Construction Emissions (tons/yr)	SJVAPCD Thresholds of Significance (tons/yr)
ROG (VOC)	1.3	0.572	10
NO_x	9.6	4.224	10
CO	5.8	2.552	100
SO_x	Less than 0.001	Less than 0.0004	27
PM_{10}	0.8	0.352	15
$PM_{2.5}$	0.6	0.264	15

*Source: * As noted earlier, air quality impacts from the Project have been compared to a similar project (Plainview Wastewater System Project or Plainview) in Tulare County that were estimated using the SacMetro Roadway Construction Emissions Model Version 7.1.5.1 (see Appendix "A" of this DEIR. Website: http://airquality.org/ceqa/RoadConstructionEmissionsModelVer7_1_5_1.xls*

As shown in **Table 3.3-8**, the short-term construction-related emissions would not exceed Air District thresholds of significance. Additionally, the Project operations would generate a very small number of vehicle trips associated with maintenance of the pipeline. As these trips are far lower than 1,453 vehicle trips per day SPAL limit, operational emissions are assumed to be insignificant.[28] Therefore, the Project would result in a ***Less Than Significant Project-specific Impact*** to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impacts***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Sac Metro Road Construction Emissions Model Version 7.1.5.1 data presented in Appendix "A" of this DEIR that was used for Plainview's similar wastewater system project. The Project would result in short-term emissions relating to the construction of the pipeline. Ongoing operation and maintenance of the pipeline would result in a limited number of vehicle trips associated with maintenance of

[28] Air District, GAMAQI. Page 85.

the pipeline and/or lift station(s). The Project, both during construction and operation phases, would result in less than significant impacts to air quality. Project related emissions would not substantially contribute to cumulative impacts in the air basin. Therefore, the Project would result in a ***Less Than Significant Cumulative Impact*** to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impacts***

As noted earlier, the Project's construction and operational emissions would not exceed the Air District's thresholds of significance and would not contribute substantially to an existing or projected air quality violations. Therefore, the Project would result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

c) 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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

Project Impact Analysis: ***Less Than Significant Impact***

As discussed in Checklist Items a) and b) earlier, the Project would be required to comply with all applicable Air District and ARB standards, rules, and regulations for construction activities. As shown in **Table 3.3-8**, Project construction-related emissions do not exceed the Air District's thresholds of significance for any criteria pollutant. Therefore, the Project would have a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is San Joaquin Valley Air Basin. This cumulative analysis is based on the information provided in the Sac Metro Road Construction Emissions Model (Version 7.1.5.1) data presented in Appendix "A" of this DEIR. The Project would result in short-term emissions relating to the construction of the pipeline. Ongoing operation and maintenance of the pipeline would result in a limited number of vehicle trips associated with maintenance of the pipeline. Furthermore, the Project would comply with all applicable Air District and ARB rules and regulations for construction-related activities. During construction and operation phases, the Project would not exceed Air District thresholds of significance and, therefore would not substantially contribute to cumulative impacts in the air basin. As such, the Project would result in a ***Less Than Significant Cumulative Impact*** to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impacts***

As noted earlier, the Project construction- and operations-related emissions would not exceed the Air District's thresholds of significance and would not contribute substantially to an existing or projected air quality violations. Therefore, the Project would result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

d) Expose sensitive receptors to substantial pollutant concentrations?

Project Impact Analysis: ***Less Than Significant Impact***

Sensitive receptors are those individuals who are sensitive to air pollution and include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. For the purposes of a CEQA analysis, the Air District considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units.[29]

There are less than 30 sensitive receptors (i.e., residences) located along the proposed main pipeline alignment. The majority of receptors have been identified as single-family residences which are located within the community of Traver along Merritt Drive. The nearest school, Traver Elementary, is immediately north of the proposed alignment on Merritt Drive. There are no other sensitive receptors such as daycare centers, nursing homes, or hospitals located along the pipeline alignments.

The Air District does not provide specific guidance on evaluation of a project's potential for adverse health risks during construction-related activities. However, the Air District's Ambient Air Quality Analysis Project Daily Emissions Assessment (2013) and draft policy Project Impact on Ambient Air Quality Status under CEQA (2015) documents do provide guidance on how to evaluate whether a project would require an Ambient Air Quality Analysis (AAQA).[30] Projects requiring an AAQA would also need to prepare a health risk assessment if the AAQA indicates that project emissions exceed any ambient air quality standards at the project boundary.

Pursuant to the Air District's guidance, Project-related average daily emissions were calculated and are provided in **Table 3.3-9**. Construction of the Project would take place in phases over the course of approximately 120 days (or approximately 6 months accounting for only active construction days). As shown in **Table 3.3-9**, Plainview's average daily emissions are all below the Air District's 100 pound per day (lbs./day) threshold for requiring an AAQA. As the Traver Community Wastewater Project is approximately 44 percent the size of Plainview, emissions estimates were reduced by 44% to reflect Traver Communnity Wastewater Project's size (and subsequent construction-related activities emissions) compared with Plainview's.

[29] Ibid. 10, 39, and 44.
[30] Air District websites at http://www.valleyair.org/transportation/ceqa%20rules/gamaqi_aaqa_05-24-2013.pdf and http://www.valleyair.org/busind/draft-policies/project-impact-on-ambient-air-quality-under-ceqa.pdf, accessed September 24, 2017.

Table 3.3-9 Unmitigated Project Construction-Related Average Daily Emissions				
Pollutant	*Plainview Project Construction Emissions (tons/yr.)	Traver Community Wastewater Project Construction Emissions (tons/yr.)	Plainview Average Daily Construction Emissions (lbs./day)	Traver Community Wastewater Project Average Daily Construction Emissions (lbs./day)
ROG (VOC)	1.3	0.572	9.4	4.136
NO_x	9.6	4.224	69.6	30.624
CO	5.8	2.552	42.0	18.48
SO_x	Less than 0.001	0.0004	0	0
PM_{10}	0.8	0.352	5.8	2.552
$PM_{2.5}$	0.6	0.264	4.3	1.892
*Source: *See Appendix "A" of this DEIR.*				

Since the Project's construction-related emissions do not require an AAQA and operations are likely to be limited to maintenance of the pipeline and did not require quantification of emissions, the Project does not warrant a health risk assessment. As such, significant health risk impacts are not anticipated. Therefore, the Project would result in a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. Although there are sensitive receptors (in the form of residences) along the Project's alignment, it is anticipated that the Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, based on the above analysis and projected emissions from the Project's construction phase, the Project would result in a ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Project would result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

e) Create objectionable odors affecting a substantial number of people?

Project Impact Analysis: ***Less Than Significant Impact***

While offensive odors do not cause any physical harm, they can be unpleasant, leading to distress among the general public and generates citizen complaints to local government

agencies (such as the Sheriff, Fire or Environmental Health Departments) and the local air district. Any project with the potential to expose members of the public to objectionable odors has the potential to adversely impact the atmosphere (environment). Because of the subjective nature of odor impacts, the number of variables that may influence the potential for an odor impact, and the variety of odor sources; there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Projects should be evaluated on a case-by-case basis to determine if there are anticipated impacts to the environment associated with objectionable odors.

It is anticipated that the Project's construction-related activities would result in diesel emissions exhaust from construction equipment along the course of the pipelines which may release odors into the atmosphere. However, construction-related emissions would be short-term, temporary, and are not anticipated to affect a substantial number of receptors at any given time. Following construction-related activities, the Project would not emit odors. Also, the downwind location of the WWTP and proposed improvements to the existing wastewater treatment plant to provide a more reliable and efficient process would also minimize potential odor impacts. Therefore, the Project would result in a ***Less Than Significant Project-specific Impact*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. The Project's construction-related activities could potentially generate odors associated with diesel combustion emissions; however, construction-related odors are anticipated to be temporary and short-term. The Project's permanent operation (maintenance of the pipeline and improvements to the existing wastewater treatment plant to provide a more reliable and efficient process) is not anticipated to result in the release of substantial or significant odors into the atmosphere. As such, the Project would result in a ***Less Than Significant Cumulative Impacts*** related to this Checklist Item.

Mitigation Measure(s): ***None Required.***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Project would result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

DEFINITIONS/ACRONYMS

Definitions

Ambient Air Quality Standards, These standards measure outdoor air quality. They identify the maximum acceptable average concentrations of air pollutants during a specified period of time. These standards have been adopted at a State and Federal level.

Best Available Control Measures (BACM), A set of programs that identify and implement potentially best available control measures affecting local air quality issues.

Best Available Control Technologies (BACT), The most stringent emission limitation or control technique of the following: 1.) Achieved in practice for such category and class of source 2.) Contained in any State Implementation Plan approved by the Environmental Protection Agency for such category and class of source. A specific limitation or control technique shall not apply if the owner of the proposed emissions unit demonstrates to the satisfaction of the APCO that such a limitation or control technique is not presently achievable 3.) Contained in an applicable federal New Source Performance Standard or 4.) Any other emission limitation or control technique, including process and equipment changes of basic or control equipment, found by the APCO to be cost effective and technologically feasible for such class or category of sources or for a specific source.

Carbon Monoxide (CO), Carbon monoxide is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone).

Hydrogen Sulfide (H_2S), Hydrogen sulfide is a highly toxic flammable gas. Because it is heavier than air, it tends to accumulate at the bottom of poorly ventilated spaces.

Lead (Pb), Lead is the only substance which is currently listed as both a criteria air pollutant and a toxic air contaminant. Smelters and battery plants are the major sources of the pollutant "lead" in the air. The highest concentrations of lead are found in the vicinity of nonferrous smelters and other stationary sources of lead emissions. The EPA's health-based national air quality standard for lead is 1.5 micrograms per cubic meter ($\mu g/m_3$) [measured as a quarterly average].

Metropolitan Planning Organization (MPO), Tulare County Association of Governments (TCAG) is the MPO for Tulare County. MPO's are responsible for developing reasonably available control measures (RACM) and best available control measures (BACM) for use in air quality attainment plans and for addressing Transportation Conformity requirements of the federal Clean Air Act.

Mobile Source, A mobile emission source is a moving object, such as on-road and off-road vehicles, boats, airplanes, lawn equipment, and small utility engines.

Nitrogen Oxides (Oxides of Nitrogen, NO_x), NO_x are compounds of nitric oxide (NO) and nitrogen dioxide (NO_2). NO_x are primarily created from the combustion process and are a major contributor to ozone smog and acid rain formation. NOx also forms ammonium nitrate particulate

in chemical reactions that occur when NOx forms nitric acid and combines with ammonia. Ammonium nitrate particulate is an important contributor to PM10 and PM2.5.

Ozone (O_3), Ozone is a pungent, colorless, toxic gas created in the atmosphere rather than emitted directly into the air. O_3 is produced in complex atmospheric reactions involving oxides of nitrogen, reactive organic gases (ROG), and ultraviolet energy from the sun in a photochemical reaction. Motor vehicles are the major sources of O_3 precursors.

Ozone Precursors, Chemicals such as non-methane hydrocarbons, also referred to as ROG, and oxides of nitrogen, occurring either naturally or as a result of human activities, which contribute to the formation of ozone, which is a major component of smog.

Photochemical, Some air pollutants are direct emissions, such as the CO produced by an automobile's engine. Other pollutants, primarily O_3, are formed when two or more chemicals react (using energy from the sun) in the atmosphere to form a new chemical. This is a photochemical reaction.

Particulate Matter 2.5 Micrometers ($PM_{2.5}$), The federal government has recently added standards for smaller dust particulates. $PM_{2.5}$ refers to dust/particulates/aerosols that are 2.5 microns in diameter or smaller. Particles of this size can be inhaled more deeply in the lungs and the chemical compositions of some particles are toxic and have serious health impacts.

Particulate Matter 10 Micrometers (PM_{10}), Dust and other particulates exhibit a range of particle sizes. Federal and State air quality regulations reflect the fact that smaller particles are easier to inhale and can be more damaging to health. PM_{10} refers to dust/particulates that are 10 microns in diameter or smaller. The fraction of PM between $PM_{2.5}$ and PM_{10} is comprised primarily of fugitive dust. The particles between PM_{10} and $PM_{2.5}$ are primarily combustion products and secondary particles formed by chemical reactions in the atmosphere.

Reactive Organic Gas (ROG), A photo chemically reactive gas, composed of non-methane hydrocarbons that may contribute to the formation of smog. Also sometimes referred to as Volatile Organic Compounds (VOCs).

Reasonable Available Control Measures (RACM), A broadly defined term referring to technologies and other measures that can be used to control pollution. They include Reasonably Available Control Technology and other measures. In the case of PM_{10}, RACM refers to approaches for controlling small or dispersed source categories such as road dust, woodstoves, and open burning. Regional Transportation Planning Agencies are required to implement RACM for transportation sources as part of the federal ozone attainment plan process in partnership with the Air District.

Reasonable Available Control Technologies (RACT), Devices, systems, process modifications, or other apparatuses or techniques that are reasonably available, taking into account: the necessity of imposing such controls in order to attain and maintain a national ambient air quality standard; the social, environmental, and economic impact of such controls; and alternative means of providing for attainment and maintenance of such a standard.

San Joaquin Valley Air Basin (SJVAB), An air basin is a geographic area that exhibits similar meteorological and geographic conditions. California is divided into 15 air basins to assist with the statewide regional management of air quality issues. The SJVAB extends in the Central Valley from San Joaquin County in the north to the valley portion of Kern County in the south.

San Joaquin Valley Air Pollution Control District (Air District), The Air District is the regulatory agency responsible for developing air quality plans, monitoring air quality, developing air quality regulations, and permitting programs on stationary/industrial sources and agriculture and reporting air quality data for the SJVAB. The Air District also regulates indirect sources and has limited authority over transportation sources through the implementation of transportation control measures (TCM).

Sensitive Receptors, Sensitive receptors are defined as land uses that typically accommodate sensitive population groups such as long-term health care facilities, rehabilitation centers, retirement homes, convalescent homes, residences, schools, childcare centers, and playgrounds.

Sensitive Population Groups, Sensitive population groups are a subset of the general population that is at a greater risk than the general population to the effects of air pollution. These groups include the elderly, infants and children, and individuals with respiratory problems, such as asthma.

Sulfur Dioxide (SO_2), Sulfur dioxide belongs to the family of SOx. These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes.

Stationary Source, A stationary emission source is a non-mobile source, such as a power plant, refinery, or manufacturing facility.

Sulfates, Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. SOx can form sulfuric acid in the atmosphere that in the presence of ammonia forms ammonium sulfate particulates, a small but important component of PM_{10} and $PM_{2.5}$. Sulfates increase the acidity of the atmosphere and form acid rain.

Transportation Conformity, A federal requirement for transportation plans and projects to demonstrate that they will not result in emissions that exceed attainment plan emission budgets or exceed air quality standards.

Transportation Control Measures (TCMs), Any measure that is identified for the purposes of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions.

Transportation Management Agencies, Transportation Management Agencies are private, non-profit, member-controlled organizations that provide transportation services in a particular area, such as a commercial district, mall, medical center, or industrial park. Transportation Management Agencies are appropriate for any geographic area where there are multiple employers or businesses clustered together that can benefit from cooperative transportation management or parking

brokerage services. Regional and local governments, business associations, and individual businesses can all help establish Transportation Management Agencies.

Transportation Management Associations (TMAs), Groups of employers uniting together to work collectively to manage transportation demand in a particular area.

Tulare County Association of Governments (TCAG), TCAG is the Transportation Planning Agency (TPA) for Tulare County. TCAG is also designated as a Metropolitan Planning Organization (MPO), the agency responsible for preparing long range Regional Transportation Plans and demonstrating Transportation Conformity with air quality plans.

Wood-burning Devices, Wood-burning devices are designed to burn "solid fuels" such as cordwood, pellet fuel, manufactured logs, or any other non-gaseous or non-liquid fuels.

Abbreviations and Acronyms

ARB	California Air Resources Board
BACM	Best Available Control Measures
BACT	Best Available Control Technologies
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CO	Carbon Monoxide
EPA	Environmental Protection Agency
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
HI	Hazard Index
H_2S	Hydrogen Sulfide
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
MPO	Metropolitan Planning Organization
O_3	Ozone
Pb	Lead
PM2.5	Particulate Matter 2.5 Micrometers
PM10	Particulate Matter 10 Micrometers
RACM	Reasonable Available Control Measures
RACT	Reasonable Available Control Technologies
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
AIR DISTRICT	San Joaquin Valley Air Pollution Control District
SJVAPCD	San Joaquin Valley Air Pollution Control District
SJVAB	San Joaquin Valley Air Basin
TAC	Toxic Air Contaminants
TCAG	Tulare County Association of Governments
TCM	Transportation Control Measures

VOC	Volatile Organic Compound
WWTP	Waste Water Treatment Plant

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Biological Resources

Chapter 3.4

SUMMARY OF FINDINGS

The proposed Preferred/Proposed Project would result in ***Less Than Significant Impacts With Mitigation*** to Biological Resources. A detailed review of potential impacts is provided in the following analysis. An updated California Natural Diversity Database (CNDDB) search was conducted for the Traver Quadrant and eight surrounding Quadrants on September 25, 2017. This search indicated that there are 20 special status species within the proposed Project area and is included as Appendix "B" of this document. Also, the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "B", *"Traver Community Plan Update Biological Evaluation Tulare County, California"* prepared by Live Oak Associates, Inc. is incorporated by reference. This information, and additional analysis in the resource discussion item are used as the basis for determining that this Project would result in a less than significant impact with mitigation incorporated.

INTRODUCTION

CEQA Requirements for Evaluation of Impacts to Biological Resources

"Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. According to Section 15382 of the CEQA Guidelines, a 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."[1]

"SSCs [Species of Special Concern] should be considered during the environmental review process. The California Environmental Quality Act (CEQA; California Public Resources Code Sections 21000-21177) requires that State agencies, local governments, and special districts evaluate and disclose impacts from "projects" in the State. Section 15380 of the CEQA Guidelines clearly indicates that species of special concern should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.[2]

CEQA Guidelines Sections 15063 and 15065 address how an impact is identified as significant. These sections are particularly relevant to SSCs. Project-level impacts on listed rare, threatened, or endangered species are generally considered significant, and therefore require lead agencies to prepare an Environmental Impact Report to fully analyze and evaluate the impacts. In determining to assign "impact significance" to populations of non-listed species, factors which are usually

[1] CEQA Guidelines Section 15382
[2] California Department of Fish and Wildlife. Website at: http://www.dfg.ca.gov/wildlife/nongame/ssc/. Accessed September 20, 2017.

considered include population-level effects, proportion of the species' range affected by a project, regional effects, and impacts to habitat features.[3]

This section of the Draft Environmental Impact Report (DEIR) and associated biological evaluation for the Project meets CEQA requirements by addressing potential impacts to biological resources on the proposed Project site and alternatives, which are located in the vicinity of Traver Community Sewer System in Tulare County. The "Environmental Setting" section provides a description of biological resources in the region, with special emphasis on the proposed project site and vicinity. The "Regulatory Setting" provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

DEFINITIONS

CEQA Guidelines Section 15380 provides definitions for the terms "species," "endangered," "threatened" and "rare."

Endangered, Rare or Threatened Species:

(a) "Species" as used in this section means a species or subspecies of animal or plant or a variety of plant.

(b) A species of animal or plant is:

(1) "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or

(2) "Rare" when either:

(A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

(B)The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

[3] Op. Cit.

THRESHOLDS OF SIGNIFICANCE

The geographical area may be either statewide or nationwide, depending on the sensitive status of the species. Standards for listing as federal endangered species are determined by the Federal Endangered Species Act, administered by U.S. Department of Fish and Wildlife. Standards for listing of California special status species (Endangered, Threatened, Candidate Endangered, Candidate Threatened, and Sensitive Species) are administered by the California Department of Fish and Wildlife (DFW). These requirements are described in further detail in the "Regulatory" section of this document.

ENVIRONMENTAL SETTING

Tulare County contains more than 4,840 square miles (3,097,600 acres) within its borders. It is located in a geographically diverse region, which can be divided into three general topographic zones: the San Joaquin Valley region on the west side of the County; the Sierra Nevada foothills region east of the valley area; and the Sierra Nevada mountain region to the east of the foothills. Elevations range from 200 to 14,000 feet above sea level. The proposed Project is located in the San Joaquin Valley floor portion of the County, which is very fertile and has been intensively cultivated for many decades. Agriculture and related industries such as agricultural packing and shipping operations and small and medium sized manufacturing plants make up the economic base of the Valley region.[4]

This area has a Mediterranean climate, with dry, hot summers with daytime temperatures commonly exceeding 90º Fahrenheit. Winters are rainy and cool with daytime temperatures rarely exceeding 65º Fahrenheit. Annual precipitation in the general vicinity of the project site is highly variable from year to year with a mean annual rainfall of approximately 12 inches, most of which falls between the months of October and March. Virtually all precipitation falls in the form of rain.

The native vegetation of the Valley is predominately characterized by the purple needlegrass series, valley oak series, vernal pools and wetland communities, and blue oak series. Fauna associated with this section include mule deer (*Odocoileus hemionus*), black-tailed deer (*Odocoileus hemionus columbianus*), coyotes (*Canis latrans*), white-tailed jackrabbits (*Lepus townsendii*), kangaroo rats (Dipodomys ingens), kit fox (*Vulpes macrotis*), and muskrats (*Ondatra Zibethicus*). Birds include waterfowl, hawks, golden eagles (*Aquila chrysaetos*), owls, white-tailed kites (*Elanus leucurus*), herons, western meadowlark (*Sturnella neglecta*) and California quail (*Callipepla californica*).[5]

This area is located in the Great Valley geomorphic province. The Great Valley province is an alluvial plain in the central portion of California, where sediments have been deposited almost continuously since the Jurassic Period (California Geological Survey [CGS] 2002)[6].

[4] Tulare County General Plan 2030 Update, Background Report, February 2010. Pages 1-4.
[5] Ibid. Pages 9-10.
[6] Ibid.

During preparation of the Traver Community Plan 2014 update, the County of Tulare obtained the services of consultants Live Oak Associates, Inc. (LOA). LOA also provided recommended mitigation measures to ensure avoidance and/or minimization of potential impacts. "Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Traver Community Plan Proposed Planning Study Area (PPSA) in the unincorporated community of Traver in Tulare County, California and evaluated likely impacts to such resources resulting from development of the PPSA (see Appendix "B"). The approximately 383-acre PPSA consists of three separate blocks of land both east and west of State Highway 99. In April and June 2014, LOA surveyed the PPSA for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the PPSA included orchards, agricultural fields, industrial/residential lands, ruderal areas, and a segment of Banks Ditch and the Traver Canal. A mosaic of agricultural, industrial, and residential/commercial land uses surround the PPSA, within a region dominated by similar land uses.

Impacts associated with future development of PPSA would be less than significant, as defined by the California Environmental Quality Act (CEQA), for special status plant species, wildlife movement corridors, downstream water quality, and sensitive habitats. Loss of habitat for special status animal species would also be considered less than significant under CEQA.

Potentially significant impacts associated with future development of the PPSA include construction mortality of the valley elderberry longhorn beetle (VELB), Swainson's hawk, San Joaquin kit fox, burrowing owl, loggerhead shrike, pallid bat, and western mastiff bat; nesting raptors and migratory birds protected under the federal Migratory Bird Treaty Act and related state laws; and colonially roosting bats. Project avoidance of active nests, dens, and roost sites identified during preconstruction surveys, compensation for the removal of any blue elderberry shrubs, and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will ensure that impacts to all special status animal species are reduced to a less than significant level.

Project impacts will also potentially be significant for waters of the U.S., which in the PPSA consists of approximately 3,400 linear feet of Banks Ditch and 2,235 linear feet of Traver Canal. Impacts to Banks Ditch and the Traver Canal can be mitigated through on-site or off site preservation or creation, through payment into an in-lieu fee program (if one is available), purchase of credits from an approved Mitigation Bank in the vicinity, or some combination of one or more of these options."[7]

In addition to implementing the mitigation measures identified by Live Oak Associates, the Tulare County General Plan has a number of policies that apply to projects within County of Tulare. For example, General Plan policies that would apply to future development in the Project area include *ERM-1.1 Protection of Rare and Endangered Species* wherein the County shall ensure the

[7] "Traver Community Plan Update Biological Evaluation Tulare County, California" Prepared by Live Oak Associates, Inc. May 7, 2014.

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; *ERM-1.17 Conservation Plan Coordination* wherein the County shall coordinate with local, State, and federal habitat conservation planning efforts (including Section 10 Habitat Conservation Plan) to protect critical habitat areas that support endangered species and other special-status species; and *ERM-2.7 Minimize Adverse Impacts* wherein the County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

An updated CNDDB search identified potential special status species which might occur onsite or in the project vicinity. Sources of information used in their research included: the *California Natural Diversity Data Base (CNDDB)* (DFG 2017) related to plants and animals of the San Joaquin Valley region. See **Table 3.4-1** for a complete listing of all potential species for the project vicinity which is also contained in Appendix "B".

Twenty (20) Special Status Species are known to occur in the vicinity of the proposed Traver Community Wastewater System (the action area). Field surveys were not conducted during this biological evaluation because all areas that will be disturbed are located on actively used public rights-of-way (i.e., existing roadways and/or shoulders) and within the existing WWTP. As such, the Project would not involve any habitat of any special species. A Swainson's hawks nest with two adult hawks is reported in the CNDDB search which is located on the south side of the St. Johns River, approximately one mile west of Road 80, about 4.9 miles southeast of the Community of Traver.

Table 3.4-1
Special Status Species with Potential to Occur in the Project Vicinity

Common Name *Scientific Name*	**Status (Federal/State/ CNPS)**	**Habitat Requirements**	**Potential for Occurrence in Alternatives area**
Species Listed or Proposed for Listing			
Plants			
Hovers Spurge (*Euphorbia hooveri*)	FT/1B.2	This species requires vernal pools on volcanic mudflow or clay substrate.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.

Table 3.4-1
Special Status Species with Potential to Occur in the Project Vicinity

Common Name ***Scientific Name***	**Status (Federal/State/ CNPS)**	**Habitat Requirements**	**Potential for Occurrence in Alternatives area**
Spiny-sepaled button-celery (*Eryngium spinosepalum*)	1B.2	This species is found within vernal pools and valley and foothill grasslands.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
Winter's sunflower (*Helianthus winteri*)	1B.2	This species if found within cismontane woodland, valley and foothill grassland. Often found on relatively stepp south-facing slopes, granitic and often rocky habitats.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
Heartscale (*Atriplex cordata var. cordulata*)	1B.2	Typically found in chenopod scrub, valley and foothill grasslands, and meadows and seeps. Also found in alkaline flats and scalds with sandy soils.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
Brittlescale (*Atriplex depressa*)	1B.2	Typically found in chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and associated with vernal pools.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
Lesser saltscale (*Atriplex minuscula*)	1B.1	Typically found in chenopod scrub habitats, playas, and valley and foothill grassland.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
Subtle orache (*Atriplex subtilis*)	1B.2	Usually found in valley and foothill grassland, requires alkaline soils.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.

Table 3.4-1
Special Status Species with Potential to Occur in the Project Vicinity

Common Name ***Scientific Name***	**Status (Federal/State/ CNPS)**	**Habitat Requirements**	**Potential for Occurrence in Alternatives area**
Earlimart orache (*Atriplex cordulata var. erecticaulis*)	1B.2	Species can be found in valley and foothill grassland.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
Recurved larkspur (*Delphinium recurvatum*)	1B.2	Generally found in chenopod scrub, valley and foothill grassland and cismontane woodland.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
California satintail (*Imperata brevifolia*)	2B.1	Generally found in coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows and alkali seeps, and riparian scrub.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
California alkali grass (*Puccinellia simplex*)	1B.2	Found in meadows and seeps, chenopod scrub, valley and foothill grasslands and vernal pools.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
San Joaquin adobe sunburst (*Pseudobahia peirsonii*)	FT/CE/1B.1	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	**Unlikely.** No habitat or soils that support the species in or near the Project site. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.
San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*)	FT/CE/1B.1	This species occurs in the vicinity of vernal pools.	**Unlikely.** No undisturbed habitat exists along the alignments and WWTP. Intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat.

Table 3.4-1
Special Status Species with Potential to Occur in the Project Vicinity

Common Name ***Scientific Name***	**Status (Federal/State/ CNPS)**	**Habitat Requirements**	**Potential for Occurrence in Alternatives area**
Birds			
Swainson's hawk (*Buteo swainsoni*)	FSC/CT	Nests in large trees especially in riparian corridors. Forages in agricultural fields and grasslands.	**Possible.** Potential nesting trees are located off-site and east of the Project location. Proximity to crops such as alfalfa may provide foraging habitat.
Western Yellow Billed Cuckoo (*Coccyzus americanus occidentalis*)	FT/CE	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles or wild grape.	**Possible.** Potential nesting trees are located off-site and east of the Project location; however, no riparian habitat is in the vicinity.
Mammals			
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE/CT	Chenopod scrub, grasslands, sometimes forages in agricultural areas.	**Possible.** It is possible that denning and foraging habitat exists within the Project area. However, intensive agricultural, residential and commercial uses, and roadways where sewer collection system pipes will be located have completely displaced natural habitat. All work will be completed within existing rights-of-way that are currently paved with permanent surfaces versus the habitat suitable as denning sites. The potential for foraging habitat is possible on adjacent agricultural fields.
Amphibians			
California Tiger Salamander (*Ambystoma californiense)*	FT/CT	Needs underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**Unlikely.** No vernal pools or other water bodies occur in the Project vicinity.
Invertebrates			
Vernal Pool Fairy Shrimp (*Branchinecta lynchi)*	FT	Inhabit swall, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**Unlikely.** No vernal pools or other water bodies occur in the Project vicinity.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi)*	FE	Pools commonly found in grass-bottomed swales of unplowed grasslands, some pools are mud-bottomed and highly turbid.	**Unlikely.** No vernal pools or other water bodies occur in the Project vicinity.

Table 3.4-1
Special Status Species with Potential to Occur in the Project Vicinity

Common Name ***Scientific Name***	**Status (Federal/State/ CNPS)**	**Habitat Requirements**	**Potential for Occurrence in Alternatives area**
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus)*	FT	Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	**Unlikely.** No Elderberry shrubs occur in the Project vicinity.

STATUS CODES:

Federal		***California***
FE	*Federally Endangered*	*CE – California Endangered*
FT	*Federally Threatened*	*CT - California Threatened*
FSC	*Species of concern as identified by the U.S. Fish and Wildlife Service*	*1B.1 - Seriously threatened in California* *1B.2- Moderately threatened in California* *2B.1- Seriously threatened in California, but more common elsewhere*

The information contained in Table 3.4-1 is updated from the in information contained in the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH #2014) , Appendix "B", *"Traver Community Plan Update Biological Evaluation Tulare County, California"* prepared by Live Oak Associates, Inc. is incorporated by reference.

REGULATORY SETTING

Applicable Federal, State, and Local regulations specific to biological resources are described as follows. The following environmental regulatory settings were summarized, in part, from information contained in the *Tulare County General Plan 2010 Background Report.*

Federal Agencies & Regulations

Federal Endangered Species Act

"The U.S. Fish and Wildlife Service (USFWS) administers the Federal Endangered Species Act (16 USC Section 153 et seq.) and thereby has jurisdiction over federally listed threatened, endangered, and proposed species. Projects that may result in a "take" of a listed species or critical habitat must consult with the USFWS. "Take" is broadly defined as harassment, harm, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collection; any attempt to engage in such conduct; or destruction of habitat that prevents an endangered species from recovering (16 USC 1532, 50 CFR 17.3). Federal agencies that propose, fund, or must issue a permit for a project that may affect a listed species or critical habitat are required to consult with the USFWS under Section 7 of the Federal Endangered Species Act. If it is determined that a federally listed species or critical habitat may be adversely affected by the federal action, the USFWS will issue a "Biological Opinion" to the federal agency that describes minimization and avoidance measures that must be implemented as part of the federal action. Projects that do not have a federal nexus must apply for a take permit under

Section 10 of the Act. Section 10 of the Act requires that the project applicant prepare a habitat conservation plan as part of the permit application (16 USC 1539)."[8]

"Under Section 4 of the Federal Endangered Species Act, a species can be removed, or delisted, from the list of threatened and endangered species. Delisting is a formal action made by the USFWS and is the result of a determined successful recovery of a species. This action requires posts in the federal registry and a public comment period before a final determination is made by the USFWS."[9]

Conservation Plans

A habitat conservation plan (HCP) is a plan that outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species and usually includes measures to minimize impacts. There are two HCPs that apply in Tulare County: 1) Recovery Plan for Upland Species of the San Joaquin Valley, and 2) the Kern Water Bank Habitat Conservation Plan.

The Recovery Plan for Upland Species of the San Joaquin Valley identifies several (34) species that are important in the San Joaquin Valley: The Kern Water Bank Habitat Conservation Plan also applies to Tulare County; this Plan; however, only applies to an area in Allensworth located in the southwest quadrant of the County.[10]

Habitat Conservation Plans

"Habitat Conservation Plans (HCPs) are required for a non-federal entity that has requested a take permit of a federal listed species or critical habitat under Section 10 of the Endangered Species Act. HCPs are designed to offset harmful effects of a proposed project on federally listed species. These plans are utilized to achieve long-term biological and regulatory goals. Implementation of HCPs allows development and projects to occur while providing conservation measures that protect federally listed species or their critical habitat and offset the incidental take of a proposed project. HCPs substantially reduce the burden of the Endangered Species Act on small landowners by providing efficient mechanisms for compliance with the ESA, thereby distributing the economic and logistic effects of compliance. A broad range of landowner activities can be legally protected under these plans (County of Tulare, 2010 Background Report, pages 9-6 and 9-7, 2010a). There are generally two types of HCPs, project specific HCPs which typically protect a few species and have a short duration and multi-species HCPs which typically cover the development of a larger area and have a longer duration."[11]

Migratory Bird Treaty and Bald and Golden Eagle Protection Act

"The Migratory Bird Treaty Act (MBTA, 16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668) protect certain species of birds from direct "take". The MBTA

[8] Tulare County General Plan 2030 Update and Final EIR adopted by the Board of Supervisors, August 28, 2012, Resolution No. 2012-0699, page, 3.11-2.
[9] Ibid.
[10] Kern Water Bank, Habitat Conservation Plan/Natural Community Conservation Plan, Kern Water Bank Authority, October 2, 1997.
[11] Tulare County General Plan 2030 Update and Final EIR adopted by the Board of Supervisors, August 28, 2012, Resolution No. 2012-0699. Page 3.11-2.

protects migrant bird species from take by setting hunting limits and seasons and protecting occupied nests and eggs. The Bald and Golden Eagle Protection Act (16 USC Sections 668-668d) prohibits the take or commerce of any part of Bald and Golden Eagles. The USFWS administers both acts, and reviews federal agency actions that may affect species protected by the acts."[12]

Clean Water Act - Section 404

"Wetlands and other waters of the U.S. are subject to the jurisdiction of the U.S. Army Corp of Engineers (USACE) and U.S. Environmental Protection Agency (EPA) under Section 404 of the Clean Water Act (33 U.S.C. 1251 et seq., 1972). Together, the EPA and the USACE determine whether they have jurisdiction over the non-navigable tributaries that are not relatively permanent based on a fact-specific analysis to determine if there is a significant nexus. These non-navigable tributaries include wetlands adjacent to non-navigable tributaries that are not relatively permanent and wetlands adjacent to but that does not directly abut a relatively permanent non-navigable tributary."[13]
"Wet areas that are not regulated by this Act do not have a hydrologic link to other waters of the U.S., either through surface or subsurface flow and include ditches that drain uplands, swales or other erosional features. The USACE has the authority to issue a permit for any discharge, fill, or dredge of wetlands on a case-by-case basis, or by a general permit. General permits are handled through a Nationwide Permit (NWP) process. These permits allow specific activities that generally create minimal environmental effects. Projects that qualify under the NWP program must fulfill several general and specific conditions under each applicable NWP. If a proposed project cannot meet the conditions of each applicable NWP, an individual permit would likely be required from the USACE."[14]

State Agencies & Regulations

California Department of Fish and Wildlife (formerly Department of Fish and Game)

"The California Department of Fish and Wildlife (DFW) regulates the modification of the bed, bank, or channel of a waterway under Sections 1601-1607 of the California Fish and Game Code. Also included are modifications that divert, obstruct, or change the natural flow of a waterway. Any party who proposes an activity that may modify a feature regulated by the Fish and Game Code must notify DFW before project construction. DFW will then determine whether the Project applicant must enter into a Streambed Alteration Agreement through the authority of Section 1601 (for public entities) or Section 1603 (for private entities) of the Fish and Game Code."[15]

California Endangered Species Act

"CDFW administers the California Endangered Species Act of 1984 (Fish and Game Code Section 2080), which regulates the listing and "take" of endangered and threatened State-listed species. A

[12] Ibid. 3.11-2.
[13] Tulare County General Plan 2030 Update and Final EIR adopted by the Board of Supervisors, August 28, 2012, Resolution No. 2012-0699. . 3.11-1, 3.11-2.
[14] Ibid.
[15] Op. Cit. 3.11-3.

"take" may be permitted by California Department of Fish and Wildlife through implementing a management agreement. "Take" is defined by the California Endangered Species Act as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" a State-listed species (Fish and Game Code Section 86). Under California Fish and Wildlife Code Section 101-108 and CEQA Guidelines 15386(a), DFW is empowered to review projects for their potential impacts to State-listed species and their habitats.

The DFW maintains lists for Candidate-Endangered Species (SCE) and Candidate-Threatened Species (SCT). California candidate species are afforded the same level of protection as State-listed species. California also designates Species of Special Concern (CSC) that are species of limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species do not have the same legal protection as listed species, but may be added to official lists in the future. The CSC list is intended for use by DFW as a management tool for consideration in future land use decisions (Fish and Game Code Section 2080)."[16]

"All State lead agencies must consult with DFW under the California Endangered Species Act when a proposed project may affect State-listed species. DFW determines if a project under review would jeopardize or result in taking of a State-listed species, or destroy or adversely modify its essential habitat, also known as a "jeopardy finding" (Fish and Game Code Section 2090). For projects where DFW has made a jeopardy finding, DFW must specify reasonable and prudent alternatives to the proposed project to the State lead agency (Fish and Game Code Section 2090 et seq.)".[17]

Natural Communities Conservation Planning Act

"The Natural Communities Conservation Planning Act allows a process for developing natural community conservation plans (NCCPs) under DFW direction. NCCPs allow for regional protection of wildlife diversity, while allowing compatible development. DFW may permit takings of State-listed species whose conservation and management are provided in a NCCP, once a NCCP is prepared (Fish and Game Code Section 2800 et seq.)."[18]

Federally and State-Protected Lands

"Ownership of California's wild lands is divided primarily between federal, state, and private entities. State-owned land is managed under the leadership of the Departments of Fish and Wildlife (DFW), Parks and Recreation, and Forestry and Fire Protection (CDF). Tulare County has protected lands in the form of wildlife refuges, national parks, and other lands that have large limitations on appropriate land uses. Some areas are created to protect special status species and their ecosystems."[19]

[16] Op. Cit.
[17] Op. Cit.
[18] Op. Cit. 3.11-4.
[19] Op. Cit.

California Wetlands Conservation Policy

"The California Wetlands Conservation Policy's goal is to establish a policy framework and strategy that will ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California. Additionally, the policy aims to reduce procedural complexity in the administration of State and federal wetlands conservation programs and to encourage partnerships with a primary focus on landowner incentive programs and cooperative planning efforts. These objectives are achieved through three policy means: statewide policy initiatives, three geographically based regional strategies in which wetland programs can be implemented, and creation of interagency wetlands task force to direct and coordinate administration and implementation of the policy. Leading agencies include the Resources Agency and the California Environmental Protection Agency (Cal/EPA) in cooperation with Business, Transportation and Housing Agency, Department of Food and Agriculture, Trade and Commerce Agency, Governor's Office of Planning and Research, Department of Fish and Wildlife, Department of Water Resources, and the State Water Resources Control Board."[20]

Porter-Cologne Water Quality Control Act

"The Porter-Cologne Water Quality Control Act regulates the discharge of waste into waters of the State. The Regional Water Quality Control Board (RWQCB) administers this regulation. Water Code Section 13260 requires "any person discharging, or proposing to discharge waste, within any region that could affect the waters of the State to file a report of discharge." A report of waste discharge ("RWD") is essentially an application for waste discharge requirements ("WDRs"). WDRs contain conditions imposed on a given discharge by the appropriate RWQCBs for the purpose of protecting the beneficial uses of the waters of the State. Upon receipt of a RWD, the RWQCB may issue WDRs imposing conditions on the proposed discharge, or it may waive the requirement for WDRs."[21]

California Native Plant Society

"Originally formed in 1965 in the east bay region, the California Native Plant Society (CNPS) is a statewide non-profit organization of amateurs and professionals with a common interest in California's native plants." "The mission of the CNPS Rare Plant Program (The Program) is to develop current, accurate information on the distribution, ecology, and conservation status of California's rare and endangered plants, and to use this information to promote science-based plant conservation in California. The Program, since its inception in 1968, has developed a reputation for scientific accuracy and integrity. The Program's data are widely accepted as the standard for information on the rarity and endangerment status of the California flora. For this reason, The Program's primary responsibility is the maintenance of the CNPS Inventory of Rare and Endangered Plants of California (the CNPS Inventory), which tracks the conservation status of hundreds of plant species.

[20] Op. Cit.
[21] Op. Cit.

The Program operates under a Memorandum of Understanding (MOU) with the CDFW. The MOU outlines broad cooperation in rare plant assessment and protection, and formalizes cooperative ventures such as data sharing and production of complementary information sources for rare plants. To facilitate this cooperation, the Rare Plant Botanist is housed at the Sacramento office of the CDFW's Biogeographic Data Branch. CNPS and the CDFW Natural Diversity Data Base (CNDDB) share all data files and rare plant information and work together on a daily basis to provide current, accurate information on the distribution, endangerment status, and ecology of California's rare flora. Once a species has undergone the CNPS Review Process and has been added to a CNPS List, CNDDB uses the information gathered to map the rarest plant species to their precise locations. CNDDB makes this information available through RareFind or custom Geographic Information Systems (GIS) maps and digital information. While CNPS updates data more continuously, location information is reported more precisely by CNDDB.[22]

Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Game Code Section 3503.5 (1992) which states that it is it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulations adopted pursuant thereto. Construction disturbances during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the Department of Fish and Wildlife

Special Status Species

"Special-status species" includes all species that are listed and receive specific protection defined in federal or state endangered species legislation, as well as species not formally listed as threatened or endangered, but designated as "rare" or "sensitive" on the basis of adopted policies and expertise of state resource agencies or organizations, or policies adopted by local agencies such as counties, cities, and special districts to meet local conservation objectives. The California Native Plant Society (CNPS) is an organization in California that assists with the regulation and protection of native plants. The CNPS keeps lists of plants that may not be endangered enough for listing with the CESA or ESA, but are nearing that point. CNPS listed species are not protected under ESA or CESA unless they are a listed species; however, the CFW requires a consultation if CNPS special status plants may be impacted by a Project.

Sensitive Species Significance Criteria

Whenever possible, public agencies are required to avoid or minimize environmental impacts by implementing practical alternatives or mitigation measures. As noted in the Biological Evaluation (see Appendix "B" of this DEIR), Section 15382 of the CEQA Guidelines defines a significant

[22] California Native Plant Society, Preserving and Protecting California Native Plants and Their Habitats. Website: http://www.cnps.org/cnps/about/. Accessed September 19, 2017.

effect on the environment means as "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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

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

- 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.

- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan."[23]

Furthermore, CEQA Guidelines Section 15065(a)(1) MANDATORY FINDINGS OF SIGNIFICANCE states that a project may trigger the requirement to prepare an EIR 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."[24]

CEQA Statute Section 21083.4. Counties; Conversion of Oak Woodlands; Mitigation Alternatives:

[23] Ibid. 31.
[24] CEQA Guidelines Section 15065(a)(1)

(a) "For purposes of this section, "oak" means a native tree species in the genus Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height."*

(b) " ...If a county shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more of the…[listed] oak woodlands mitigation alternatives…"

Local Policy & Regulations

Tulare County General Plan Policies

"The preservation of sensitive habitats is a key goal of the General Plan 2030 Update, with ERM-1 Goal "To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County." The General Plan Update includes a number of policies in the Environmental Resources Management Element which support this goal. Key policies that are relevant to the proposed Project are listed as follows:[25]

ERM-1.1 Protection of Rare and Endangered Species - 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.

ERM-1.2 Development in Environmentally Sensitive Areas - 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.

ERM-1.4 Protect Riparian Areas - The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses

ERM-1.6 Management of Wetlands - The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

ERM-1.7 Planting of Native Vegetation - 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.

[25] Tulare County General Plan 2030 Update, Goals and Policies Report. Page 8-9.

ERM-1.12 Management of Oak Woodland Communities - The County shall support the conservation and management of oak woodland communities and their habitats.

ERM-1.16 Cooperate with Wildlife Agencies - The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

ERM-1.17 Conservation Plan Coordination - The County shall coordinate with local, State, and federal habitat conservation planning efforts (including Section 10 Habitat Conservation Plan) to protect critical habitat areas that support endangered species and other special-status species.

ERM-2.7 Minimize Adverse Impacts - The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

IMPACT EVALUATION

Would the project:

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

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The following analysis is excerpted verbatim from the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "B", *"Traver Community Plan Update Biological Evaluation Tulare County, California"* prepared by Live Oak Associates, Inc. and is incorporated by reference. It is noted that the mitigation measures numbering protocol has been amended to reflect the style used in this document.

"3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The 383-acre PPSA is proposed for inclusion in the Traver Community Plan area. The following subsections assume that all habitats of the PPSA will be impacted by future development under a number of individual projects. Potentially significant project impacts to biological resources and mitigations are discussed below:

3.3.1 Project Impacts to the Valley Elderberry Longhorn Beetle (Prior to Delisting) Potential Impacts.

As discussed in Section 2.5.1 of this document, three elderberry shrubs are located on ruderal land associated with the Foster Farms industrial complex (see Figure 3 [of the Biological

Evaluation]), and additional shrubs could theoretically be present in those portions of the orchards and industrial complex that were not accessible/visible at the time of the April 2014 and June 2014 field surveys. Shrubs of the PPSA are unlikely to be inhabited by VELB due to their location within a mosaic of highly disturbed lands and their isolation from riparian areas and other elderberry shrubs. For the same reasons, project-related removal of these shrubs would not constitute significant loss of habitat under CEQA. However, because the USFWS considers the removal of elderberry shrubs below 3,000 feet in elevation with stems greater than one inch in diameter tantamount to "take" of VELB, USFWS incidental take authorization would be required before the shrubs could be removed by project activities.

Although highly unlikely, project-related mortality of individual beetles is a significant impact of future development of the PPSA under CEQA. In the absence of USFWS incidental take authorization, any project-related mortality of VELB would violate the federal Endangered Species Act.

Mitigation. The following measures adapted from the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999) (Appendix D [in the Biological Evaluation]) will be implemented, as applicable, for all project activities occurring in the vicinity of elderberry shrubs. Measures 3.3.1a through 3.3.1c are intended to avoid and minimize the potential of project-related mortality of VELB. Although project-related loss of VELB habitat is a less-than-significant impact under CEQA, any project in the PPSA that removes elderberry shrubs will need to provide compensatory mitigation under the provisions of the USFWS incidental take authorization issued for the project(s). Measure 3.3.1d presents the compensatory mitigation scheme used by the USFWS.

3.4.1a (Avoidance) Prior to initiation of a given project within the PPSA, a survey for elderberry shrubs will be conducted by a qualified biologist, unless the entire project area is completely devoid of shrubby vegetation, in which case a elderberry survey is not necessary. If elderberry shrubs are identified during the survey, then they will be avoided. Typically, the USFWS considers a 100-foot disturbance-free buffer around elderberry shrubs complete avoidance. However, a buffer of as little as 20 feet may be arranged in consultation with the USFWS. The buffer will be clearly delineated with orange construction fencing with the appropriate signage posted. This elderberry avoidance area will be clearly marked with signs, fencing, and/or flagging, and maintained for the duration of work in that area. No construction personnel or equipment shall enter the elderberry avoidance area, except for as provided under *Mitigation Measure 3.3.3b* below.

***3.4.1b* (*Construction Monitoring*)** If project activities necessitate temporary entry into the elderberry avoidance area, approval will first be obtained from the USFWS and a qualified biologist will be on-site to monitor such activities for their duration within the avoidance area.

3.4.1c (Employee Education Program). Prior to implementation of projects with elderberry shrubs on site, construction personnel will receive worker environmental awareness training in the identification of the VELB and its host plant.

3.4.1d (Compensation). If it is not feasible to completely avoid all elderberry shrubs, then impacts to the shrubs will be mitigated in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999). This generally involves 1) conducting a protocol-level elderberry survey to assess the degree of "take" that will occur, 2) transplanting the shrubs to on-site or off-site lands protected in perpetuity under conservation easement ("conservation area"), or to a VELB mitigation bank, and 3) replacing each impacted stem with new elderberry plantings at a ratio of 1:1 to 1:8 (depending on stem diameter, presence of beetle exit holes, and habitat type) *or* purchasing an equivalent number of credits at a VELB mitigation bank.

3.3.2 Project-Related Mortality of San Joaquin Kit Fox

Potential Impacts. As discussed in Section 2.5.3, the San Joaquin kit fox is unlikely to occur within the PPSA. However, based on past occurrences of kit fox in the 10-mile vicinity of the PPSA, it is remotely possible that individual foxes may pass through and possibly forage on the site from time to time during dispersal movements. If a kit fox were present at the time of future construction activities in the PPSA, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the PPSA would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.

Mitigation. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Appendix E [in the Biological Evaluation]) will be implemented

3.4.2a (Pre-construction Surveys). Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.

3.4.2b (Avoidance). Should a kit fox be found using any of the sites during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.

3.4.2c (Minimization). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to:

restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.

3.4.2d (Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

3.4.2e (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level and ensure that future development activities within the PPSA remain in compliance with state and federal laws protecting this species.

3.3.3 Project-Related Mortality of Burrowing Owl

Potential Impacts. As discussed in Section 2.5.4, burrowing owls have the potential to nest or roost in the dry-farmed wheat field and along the margins of Banks Ditch and Road 44 adjacent to that field and the corn field to the north. Although highly unlikely due to lack of nearby foraging habitat and high levels of human disturbance, burrowing owls could also conceivably use small mammal burrows located in and around the industrial complex and along road margins elsewhere in the PPSA. If one or more owls were present in these areas at the time of construction, then construction activities would have the potential to injure or kill these individuals. Mortality of individual burrowing owls would violate California Fish and Game Code and the federal Migratory Bird Treaty Act, and is considered a significant impact of the project under CEQA.

Mitigation. Prior to the initiation of project-related activities involving ground disturbance or heavy equipment use on those portions of the PPSA that contain suitable burrowing owl habitat, the following measures will be implemented, adapted from the *Staff Report on Burrowing Owl Mitigation* (CDFG 1995 and 2012).

3.4.3a (Pre-construction Surveys). A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities

involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.

3.4.3b (Avoidance of Active Nests). If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

3.4.3c (Passive Relocation of Resident Owls). During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level and ensure that the project is in compliance with state and federal laws protecting this species.

3.3.4 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds

Potential Impacts. The majority of the PPSA consists of habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Two special-status birds, the Swainson's hawk and loggerhead shrike, also have the potential to nest within the PPSA. Orchard trees of the PPSA could be used by mourning doves or American robins, while mature trees bordering the PPSA along the ruderal margin of Highway 99 could be used by the western kingbird, Bullock's and hooded orioles, and various raptors, including the Swainson's hawk. Killdeers may nest on bare ground or gravel surfaces in ruderal or industrial areas of the PPSA, and the house finch may nest in the PPSA's buildings. Cliff swallows could nest in the culverts at Road 44's crossing of Banks Ditch. Raptors and migratory birds nesting within the PPSA at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or

result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.

Mitigation. The following measures will be implemented prior to the start of project activities within the PPSA.

> ***3.4.4a* (*Avoidance*).** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.
>
> ***3.4.4b (Preconstruction Surveys).*** If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.
>
> ***3.4.4c (Establish Buffers).*** Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level, and will ensure that the project remains in compliance with state and federal laws protecting these species.

3.3.5 Project-Related Mortality of Roosting Bats

Potential Impacts. Development of the PPSA may result in the removal of buildings and mature trees that provide potential roosting habitat for bats, including special status species such as the pallid bat and western mastiff bat. If trees or buildings removed by construction activities contain colonial roosts, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA.
Mitigation. The following measures will be implemented for construction activities involving the removal of buildings or mature trees.

> ***3.4.5a (Temporal Avoidance).*** To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

3.4.5b (Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

3.4.5c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.

3.4.5d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.

Implementation of the above measure will reduce impacts to roosting bats to a less than significant level under CEQA."[26]

As noted earlier, ten (10) special status species are known to occur in the vicinity of the proposed Traver Community Wastewater System Project (the action area). As shown in the CNDDB results (Appendix "B"), the presence of Swainson's hawk was indicated within five miles of the site in the last 10 years. Other raptors, such as white-tailed kite, red-tailed hawks, great-horned owls and barn owls are all known to forage and nest in the various areas throughout Tulare County, however, no evidence is available to suggest these species are within the vicinity of the Project site (for example, through CNDDB information and existing uses; such as residential uses, commercial uses, and roadways, etc.).

It is also noted that the biological accounting for the proposed Project does not preclude the opportunity for special status species from accessing or traveling through the Project site prior to or during post construction phases. There are records of special status species in the vicinity of the proposed Project and while many of the occurrences may be historical in nature, there are opportunities for species to reoccur through the area.

Therefore, potential Project-Specific impacts would be ***Less Than Significant With Mitigation*** through the implementation of Mitigation Measures 3.4-1 through 3.4-5.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

[26] Traver Community Plan Update Biological Evaluation Tulare County, California" prepared by Live Oak Associates, Inc. May, 2014. Pages 32-40.

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley, and therefore cumulative impacts would extend beyond Tulare County political boundaries.

The methodology used to analyze potential impacts on sensitive species in the proposed Project vicinity included the fact that areas where the wastewater collection system's pipes will be laid within the Community of Traver are permanently paved surfaces with no possibility of potential use as habitat and the improvements to be made at the WWTP will all be within the fenced perimeter (i.e., existing footprint) of the facility. Following construction-related activities of the Project, the undergrounded pipes will be covered and the paved surfaces restored to their permanent surfaces. As such, based on the disturbed condition of the majority of the sites, reasonable inferences were made that it was unlikely that any of the sensitive species listed would actually occur onsite. However, this Project does not preclude the opportunity for special status species from accessing or traveling through the site prior or post construction phases. Historically, there have been records of special status species in the vicinity of the proposed Project. Within the context of CEQA, potential impacts could result in significant impacts and as such, implementation of Mitigation Measures 3.4-1 through 3.4-5 would reduce potential impacts to ***Less Than Significant***.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With the implementation of Mitigation Measures 3.4-1 through 3.4-5, cumulative impacts would also be reduced to a ***Less Than Significant Impact***.

Mitigation Measures: See Mitigation Measures 3.4-1 through 3.4-5 which would be implemented prior to and during construction-related activities of the Project.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of the Mitigation Measures 3.4-1 through 3.4-5, no site specific or cumulative loss of habitat or direct impact to these special status animals would occur. Any Project-specific and cumulative impacts would be ***Less Than Significant Impact With Mitigation***

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Project Impact Analysis: ***No Impact***

As indicated earlier, the Project will be developed within existing, utilized area (e.g., roads and shoulders) which are in a continuously disturbed state. There is no habitat whatsoever where any special status species may occur within or adjacent to the Project. Areas immediately adjacent to the proposed Project area along Merritt Drive consist mostly of residential and

commercial uses, while the area immediately adjacent to the Project area along Road 44 is largely agriculturally productive farmland in all directions.

As such, there is no habitat of value for common or special status species.. Therefore, the project would result in a ***No Impact***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, sensitive species with similar habitat requirements may exist in other portions of the San Joaquin Valley; and therefore, cumulative impacts would extend beyond Tulare County political boundaries.

Potential impacts on sensitive species and their habitats, including riparian habitats, have been analyzed. As noted previously, database and literature searches which provided site-specific information related to biological resources indicated no presence of any special status species within areas which would be disturbed during construction-related activities of the Project.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project specific impacts to sensitive habitats were to occur. With implementation of Mitigation Measures 3.4-1 through 3.4-5, impacts would be less than significant. Therefore, the Project would result in a ***No Cumulative Impact***.

Conclusion: ***No Impact***

With implementation of the Mitigation Measures 3.4-1 through 3.4-5 no substantial adverse effect on any riparian habitat or other sensitive natural community would occur. Any impacts would be ***Less Than Significant Impact With Mitigation***.

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

Project Impact Analysis: ***No Impact***

As indicated in the CNDDB search; there are no protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) within or near the proposed Project. As such, the Project would have no substantial adverse effect on wetlands through direct removal, filling, hydrological interruption, or other means.

Therefore, proposed Project implementation of either Alternative would result in ***No Impact.***

Cumulative Impact Analysis: ***No Cumulative Impact***

The geographic area of this cumulative analysis is the western U.S. While the study area is limited to Tulare County, federally protected wetlands exist in other portions of the U.S., and

therefore, cumulative impacts would extend beyond County of Tulare political/jurisdictional boundaries.

As no wetlands are present on the proposed Project site, no impacts to wetlands from potential construction-related activities would occur. There is ***No Impact.***

Mitigation Measures: ***None Required***

Conclusion: ***No Impact***

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?

Project Impact Analysis: ***Less Than Significant Impact***

As indicated earlier, the Project will be developed within existing, utilized areas (e.g., roads and shoulders) which are in a continuously disturbed state. There is no habitat whatsoever where any special status species may occur within or adjacent to the Project. The site is absent of habitats that were once native to the San Joaquin Valley, and absent of areas of significant native habitat important to native wildlife species in the general site vicinity. As such, use of the Project Site as a "movement corridor" by native wildlife is not likely. The proposed Project site fits neither criterion. Therefore, ***No Project-specific Impacts*** related to this Checklist Item will occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley. While the study area is limited to Tulare County, corridors for fish and wildlife species with similar habitat requirements may exist in other portions of the San Joaquin Valley; and therefore, cumulative impacts will extend beyond County of Tulare political/jurisdictional boundaries.

Potential impacts on habitats for sensitive species, including riparian and wildlife corridors were analyzed. Reconnaissance-level field surveys were conducted and several database and literature searches that provide site-specific information related to existing biological resources were examined.

Because the proposed actions would consist of underground pipelines, limited development, and improvements at the existing WWTP, it is not anticipated to obstruct wildlife movement more than temporarily, or not at all. As such, cumulative impacts would be ***Less Than Significant***.

Mitigation Measures: ***None Required***

Conclusion: ***Less Than Significant Impact***

Because the proposed Project would not result in harmful effects on regional fish or wildlife movements, any impacts would be ***Less Than Significant***.

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

Project Impact Analysis: ***No Impact***

The proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinances. No County ordinances protect the types of biological resources found on areas where the proposed Project would occur. In the unlikely event that Special Status species are encountered during Project implementation, the County would consult with Cal Fish & Wildlife, USFWS or any other agencies on potential impacts to Special Status Species. As such, neither Alternative would conflict with Tulare County General Plan policies or natural resource protection ordinances. Therefore, the Project would result in ***No Impact*** to this resource.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

Local policies relating to impacts on biological resources have been summarized earlier. There are no impacts to any local policies or ordinances protecting biological resources, therefore, any cumulative impact would be ***Less Than Significant***.

Mitigation Measures: ***None Required***

Conclusion: ***Less than Significant Impact***

As the Project would result in ***No Project-related Impact and Less Than Significant Cumulative Impacts***, no mitigation measures are required.

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?

Project Impact Analysis: ***No Impact***

There are two habitat conservation plans that could apply in Tulare County. The Kern Water Habitat Conservation Plan only applies to an area in Allensworth; therefore, the Project site is not subject to this plan. The Recovery Plan for Upland Species in the San Joaquin Valley outlines a number of species that are important to the San Joaquin Valley. None of these species were identified within the impact areas of the Project. As such, no Project-specific impacts related to this impact area would occur. Further, the proposed Project would not

conflict with any approved habitat conservation plans, natural community conservation plans, or regional or state habitat conservation plans. Therefore, the proposed Project would have ***No Impact***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is California.
A summary of state, regional and local habitat conservation plants was included in the "Regulatory Setting" section, above.

There are no adopted Habitat Conservation Plans which apply to the Project site and its immediate vicinity. Therefore, there would be ***No Cumulative Impact*** because the proposed Project site is not subject to an HCP or other local, regional or state habitat conservation plan.

Conclusion: ***No Impact***

There are ***No Project-related or Cumulative Impacts***; therefore, no mitigation measures are required.

REFRENCES

Tulare County General Plan 2030 Update, Background Report, February 2010

Tulare County General Plan 2030 Update and Final EIR adopted by the Board of Supervisors, August 28, 2012, Resolution No. 2012-0699

Traver Community Plan 2014 Update

Traver Community Plan Update Biological Evaluation Tulare County, California" prepared by Live Oak Associates, Inc. (included as part of Appendix "B" of this document)

CEQA Guidelines, California Code of Regulations Sections 15000 et seq.

California Department of Fish & Wildlife. Websites: Species of Special Concern which was accessed September 20, 2017 at: https://www.wildlife.ca.gov/Conservation/SSC and Fully Protected Animals: which was accessed at: http://www.dfg.ca.gov/wildlife/nongame/t_e_spp/fully_pro.html.

California Fish and Game Code, Sections 2062, 2067, 2068, 3503.5

California Native Plant Society. Websites:
Preserving and Protecting California Native Plants and Their Habitats which was accessed at: http://www.cnps.org/cnps/about/ and Rare Plant Program which was accessed at: http://www.cnps.org/cnps/rareplants/.

U.S. Fish and Wildlife Service. Endangered Species Glossary. Which was accessed at: http://www.fws.gov/nc-es/es/glossary.pdf. Accessed September 20, 2017.

U.S. Fish and Wildlife Service Standardized Recommendations for Protecting of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance, which was accessed at: http://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/kitfox_standard_rec_2011.pdf

USFWS San Joaquin Kit Fox Recovery Plan, Recovery Plan for Upland Species of the San Joaquin Valley, California, September 30, 1998. California State University Stanislaus which was accessed September 20, 2017 at: http://esrp.csustan.edu/publications/pubhtml.php?doc=sjvrp&file=cover.html.

Chapter 3.5

Cultural Resources

SUMMARY OF FINDINGS

The proposed Project would result in impacts to Cultural Resources that are ***Less Than Significant With Mitigation Measures***. Appendix "C" of this document includes information provided by Southern San Valley Historical Resources Information Center, at California State University, Bakersfield (Center), and the California Native American Heritage Commission Sacred Lands File search. Also, the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "C", *"Cultural Resources Assessment, Proposed Planning Study Area for the Traver Community Plan Update, Tulare County, California"* prepared by Sierra Valley Cultural Planning is incorporated by reference. This information, and additional analysis in the resource discussion item are used as the basis for determining that this Project would result in a less than significant impact with mitigation incorporated.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources.[1] If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of "historical resources" is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. "Substantial adverse change" is defined as "physical demolition, destruction, relocation, or alteration of the resource…"

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the project site. Provisions for the accidental discovery of historical or unique archaeological resources accidentally discovered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."

This section of the DEIR for the Project meets the CEQA requirements by addressing potential impacts to cultural resources on the Project site. The "Environmental Setting" section provides a description of cultural resources in the region, with special emphasis on the Project site and

[1] "CEQA and Historical Resources" CEQA Technical Advice Series, http://ceres.ca.gov/ceqa/more/tas/page3.html

vicinity. The "Regulatory Setting" section provides a description of applicable State and local regulatory policies. Results from CHRIS results are included in Appendix "C" of this DEIR. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant, if necessary.

CEQA Thresholds of Significance

Under CEQA Guidelines Section 15064.5. (b) "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

(4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.

(5) When a project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources Code Section 5024.5. Consultation should be coordinated in a timely fashion

with the preparation of environmental documents."[2]

ENVIRONMENTAL SETTING

Cultural Background

"Tulare County lies within a culturally rich province of the San Joaquin Valley. Studies of the prehistory of the area show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. Tulare County was inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory."[3]

"California's coast was initially explored by Spanish (and a few Russian) military expeditions during the late 1500s. However, European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. About the same time, valley settlers constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region."[4]

"The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The California Department of Finance estimated the 2007 Tulare County population to be 430,167."[5]

Tulare County's Documented Cultural Resources

Tulare County's known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources. These resources are available to the general public. They have been summarized in the Tulare County General Plan Update 2030 Background Report (2010).[6]

[2] CEQA Guidelines, Section 15064.5 (b)
[3] Tulare County 2030 General Plan. Page 8-5.
[4] Tulare County 2030 General Plan. Page 8-5.
[5] Ibid. Page 8-6.
[6] Tulare County General Plan Background Report. Pages 9-57 to 9-59.

The Southern San Joaquin Valley Historical Resources Information Center, at California State University, Bakersfield (Center) conducted a search for the Traver Community Wastewater Systems Improvements Project as requested by Tulare County RMA. In summary, the Center's search response letter indicated that two recorded resources (P-54-002171 and P-54-004626) is located within the project area. The letter also indicated that two recorded resources (P-54-002170 and P-54-002172) are located within a one-half mile radius of the Project. These resources consist of Traver Canal, Banks Ditch, Southern Pacific/San Joaquin Railroad, and an historic era road. The letter also recommended that the NAHC o be contacted regarding cultural resources that may not be included in the CHRIS inventory (see later dated August 21, 2017, in Appendix "C"). Consistent with the Center's recommendation, Tulare County RMA also requested a Sacred Lands File (SLF) search from the California Native American Heritage Commission (NAHC). The NAHC provided a letter dated August 18, 2017 showing "negative" results which indicates there are no documented Sacred Lands within the Project area (see letter dated January 18, 2017; also in Appendix "C").

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources. The legislation established the National Register of Historic Places and the National Historic Landmarks Program. It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state. A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements federal agencies to consider the effects of proposed federal projects on historic properties (Section 106, NHPA). Federal agencies and recipients of federal funding are required to initiate consultation with the State Historic Preservation Officer (SHPO) as part of the Section 106 review process.[7]

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the

[7] Advisory Council on Historic Preservation, National Historic Preservation Program: Overview website: http://www.achp.gov/overview.html and National Register Evaluation Criteria website: http://www.achp.gov/nrcriteria.html. Accessed June 15, 2017.

governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.[8]

Among OHP's responsibilities are to identify, evaluate, and register historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in California State University Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.[9]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.[10]

CEQA Guidelines: Historical Resources Definition

CEQA Guidelines Section 15064.5(a) defines a historical resource as:

"(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code Section 5024.1; Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering,

[8] Advisory Council on Historic Preservation, State Historic Preservation Officers, http://www.achp.gov/shpo.html. Accessed June 15, 2017.
[9] California State Parks, Office of Historic Preservation, *Mission and Responsibilities website:* http://ohp.parks.ca.gov/?page_id=1066. Accessed September 19, 2017.
[10] California State Parks, Office of Historic Preservation, *California Register: Criteria for Designation*, http://www.ohp.parks.ca.gov/?page_id=21238. Accessed September 19, 2017.

scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code Section 5024.1; Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Sections 5020.1(j) or 5024.1."[11]

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

"(1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of Section 21083.2. The time and cost limitations described in Public Resources Code Section

[11] CEQA Guidelines Section 15064.5(d)

21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process."[12]

CEQA Guidelines: Human Remains

Section 15064.5 of CEQA Guidelines provides specific guidance on the treatment of human remains pursuant to Public Resources Code § 5097.98, which provides specific guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

"(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act."[13]

"(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

[12] CEQA Guidelines Section 15064.5(c)
[13] CEQA Guidelines, Section 15064.5(d)

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner."[14]

(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."[15]

Paleontological Resources

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on

[14] CEQA Guidelines Section 15064.5(e)
[15] CEQA Guidelines Section 15064.5(f)

public lands, except with express permission of the public agency having jurisdiction over such lands."[16]

Tribal Consultation Requirements: SB 18 (Burton, 2004)[17]

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. This bill amended Section 815.3 of the Civil Code, to amend Sections 65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.2 to, the Government Code, relating to traditional tribal cultural Places. SB 18, enacted March 1, 2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.[18]

As this Project is not adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993); Tribal Consultation for SB 18 compliance is not required.

Tribal Consultation Requirements: AB 52 (Gatto, 2014)[19]

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Existing law establishes the NAHC and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the

[16] Public Resources Code 5097.5(a)
17 Senate Bill No. 18, Chapter 905, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200320040SB18, accessed June 15, 2017.
[18] Government Code §65352.3
[19] Assembly Bill No. 52 Chapter 532, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52, accessed June 15, 2017.

geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintain an inventory of sacred places.[20]

Upon written request, the NAHC is required to conduct a Sacred Lands File search for sites located on or near a project site. As discussed in further detail in Chapter 3.17 Tribal Cultural Resources, a Sacred Lands File check indicated negative results (that is, no Sacred Lands were identified) for the Project location (See Appendix "C" of the DEIR at NAHC Sacred Lands File search letter dated August 18, 2017). Also discussed in further detail in Chapter 3.17, an opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52, and no tribes responded to the consultation requests within the mandatory response time-frames; therefore, this DEIR has been completed consistent and compliant with AB 52 (see Appendix "C" of the DEIR regarding Tribal consultation process).

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that apply to the proposed Project are listed as follows:

ERM-6.1 Evaluation of Cultural and Archaeological Resources - 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 Protection of Resources with Potential State or Federal Designations - 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-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted

[20] Native American Heritage Commission, About the Native American Heritage Commission, http://www.nahc.ca.gov/about/, accessed June 15, 2017.

in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

IMPACT EVALUATION

Would the project:

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

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project activity would be located within existing road rights-of-way and within the existing footprint of the Traver WWTP. A search conducted by the Southern San Valley Historical Resources Information Center, at California State University, Bakersfield (Center) in the California Historic Resources Information System (CHRIS) indicated that there are two recorded cultural resources within the project area (P-54-002171 and P-54-004626) and two recorded resources within a one-half mile radius (P-54-002170, and P-54-002170). These resources consist of Traver Canal, Banks Ditch, Southern Pacific/San Joaquin Railroad, and an historic era road (These results are consistent with the findings contained in the *Cultural Resources Assessment for the Traver Community Plan Update*; see Appendix "C" of this document). Proposed Project related improvements will not take place in the vicinity of Traver Canal or Banks Ditch. As the proposed Project is currently designed, the new 12-inch sewer main will be installed underneath the Southern Pacific/San Joaquin Railroad to provide gravity mains north and south on Old State Highway 99. Because the County plans to bore underneath the railroad to install the pipeline, there will be no potential significant impact to the historic-era resource.

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. As noted earlier, the CHRIS search results are included in Appendix "C" of this DEIR.

Consistent with the requirements of AB 52, Tulare County requested a records search by the California Native American Heritage Commission (NAHC) of its Sacred Lands File (SLF) The NAHC provided the results of its SLF search (see letter dated August 18, 2017, contained in Appendix "C" of this DEIR) indicating "negative results" (that is, no sacred lands are known to be located in the Project area). The Sacred Lands File Search and Native American tribal consultation that was conducted revealed no existing sacred sites within traditional cultural properties in the vicinity of the Project.

However, there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. As such, the Mitigation Measures contained Appendix "C" of the IS/MND Traver Community Plan (also Appendix "C" of this document) are incorporated in their entirety by reference and are shown as follows as Mitigation Measures 3.5.-1 and 3.5-2. With the implementation of **Mitigation Measure 3.5-1**, the Project-specific impacts would be ***Less Than Significant With Mitigation***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-1**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be ***Less Than Significant With Mitigation***.

Mitigation Measure(s):

3.5-1 If, in the course of construction or operation within the Project area, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to: planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in place shall be considered, and an appropriate method of achieving preservation in place shall be selected and implemented, if feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential

information from and about the site. Mitigation shall be consistent with CEQA Guidelines section 15126.4(b)(3).

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of the **Mitigation Measure 3.5-1**, potential Project-specific and cumulative impacts related to this Checklist Item would be reduced to ***Less Than Significant*** levels.

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

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project activity would be located within existing road rights-of-way and within the existing footprint of the Traver WWTP. The CHRIS and NAHC/SLF searches cultural resources survey report did not identify any archaeological (or cultural) resources (these results are consistent with the findings contained in the *Cultural Resources Assessment for the Traver Community Plan Update*; see Appendix "C" of this document). Additionally, the Project site has no natural streams, rivers, or geologic features on or near the site which may suggest the presence of archaeological resources. However unlikely, as the pipeline, lift station(s), and lateral connections will be located within existing rights-of-way (and other improvements within the existing footprint of the Traver WWTP), there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 3.5-1**, the Project-specific impacts would be ***Less Than Significant With Mitigation***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-1**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be ***Less Than Significant With Mitigation***.

Mitigation Measures: **See Mitigation Measure 3.5-1.**

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of the **Mitigation Measure 3.5-1**, Project-specific and cumulative impacts related to this Checklist Item would be reduced to ***Less Than Significant***.

c) **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project activity would be located within existing road rights-of-way. The CHRIS and NAHC/SLF searches (and the *Cultural Resources Assessment for the Traver Community Plan Update*; see Appendix "C" of this document) did not identify any paleontological resources. Additionally, no paleontological resources or sites, or unique geologic features have previously been encountered in the Project area. However unlikely, as the pipeline, lift station(s), and lateral connections will be located within existing rights-of-way (and other improvements within the existing footprint of the Traver WWTP), there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 3.5-2**, Project-specific impacts would be ***Less Than Significant*** .

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County. The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-2**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be ***Less Than Significant With Mitigation***.

Mitigation Measure(s):

3.5-2 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 3.5-2**, Projects-specific and cumulative impacts related to this Checklist Item would be reduced to ***Less Than Significant***.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project activity would be located within existing road rights-of-way (and other improvements within the existing footprint of the Traver WWTP). The CHRIS, NAHC/SLF searches (and the *Cultural Resources Assessment for the Traver Community Plan Update*; see Appendix "C" of this document), and consultation with Native American tribes did not identify any known remains or formal cemeteries. However unlikely, as the pipeline, lift station(s), and lateral connections will be located within existing rights-of-way (and other improvements within the existing footprint of the Traver WWTP), there is a possibility that subsurface resources could be uncovered during construction-related activities. In such an event, potentially significant impacts to previously unknown subsurface resources may occur. With the implementation of **Mitigation Measure 3.5-3**, the Project-specific impacts would be ***Less Than Significant*** .

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.5-3**, potential Project-specific impacts would be reduced to less than significant levels. Therefore, the Project's cumulative impacts would be ***Less Than Significant With Mitigation***.

Mitigation Measure(s):

3.5-3 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. **There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:**
   - **a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and**
   - **b. If the coroner determines the remains to be Native American:**
     - **i. The coroner shall contact the Native American Heritage Commission within 24 hours.**
     - **ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.**
     - **iii. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or**

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

a. The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

b. The descendant fails to make a recommendation; or

c. The landowner or his authorized representative rejects the recommendation of the descendent.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of the **Mitigation Measure 3.5-3**, Project-specific and cumulative impacts related to this Checklist Item would be reduced to ***Less Than Significant***.

DEFINITIONS

Definitions

California Historical Landmarks – The Office of Historic Preservation defines California Historical Landmarks as "buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of the criteria listed below:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder."[21]

California Historical Resources Information System (CHRIS) - The CHRIS consists of the Office of Historic Preservation (OHP), the nine Information Centers (ICs), and the State Historical Resources Commission (SHRC). The OHP administers and coordinates the CHRIS and presents proposed CHRIS policies to the SHRC, which approves these polices in public meetings. The CHRIS Inventory includes the State Historic Resources Inventory maintained by the OHP as defined in California Public Resources Code § 5020.1(p), and the larger number of resource records and research reports managed under contract by the nine ICs. Different parts of the CHRIS Inventory are a combination of paper documents and maps and digital files (whether submitted digitally or converted to that format by the CHRIS). The collective information managed electronically in the CHRIS Inventory is generally referred to as the CHRIS Database.[22]

California Register – "The State Historical Resources Commission has designed this program for use by state and local agencies, private groups and citizens to identify, evaluate, register and protect California's historical resources. The Register is the authoritative guide to the state's significant historical and archeological resources. The California Register program encourages public recognition and protection of resources of architectural, historical, archeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under the California Environmental Quality Act."23

Historical Resources – As defined in CEQA Guidelines §15064.5(a); see the "CEQA Guidelines: Historical Resources Definition" section of this DEIR. The Office of Historic Preservation defines historical resources as "buildings, structures, objects, historic and archeological sites, landscapes, districts, and all manner of properties associated with past human activities."[24]

[21] Office of Historic Preservation. California Historical Landmarks website http://ohp.parks.ca.gov/?page_id=21387 accessed September 19, 2017.
[22] Office of Historic Preservation. About the CHRIS website http://ohp.parks.ca.gov/?page_id=1068 accessed September 19, 2017.
[23] Office of Historic Preservation. About the CHRIS website http://www.ohp.parks.ca.gov/?page_id=21238 accessed September 19, 2017.
[24] Office of Historic Preservation. About the CHRIS Inventory website http://ohp.parks.ca.gov/?page_id=28063 accessed September 19, 2017.

Abbreviations and Acronyms

CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DEIR	Draft Environmental Impact Report
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
HRI	Historical Resources Inventory database
NHPA	National Historic Preservation Act of 1966
OHP	Office of Historic Preservation
SHPO	State Historic Preservation Office

REFERENCES

CEQA & Historical Resources, *CEQA Technical Advice Series*, which was accessed at: http://ceres.ca.gov/ceqa/more/tas/page3.html

CEQA Guidelines 15064.5

California Public Resources Code Section 21084.1

Tulare County General Plan 2030 Update Recirculated Draft EIR (SCH # 2006041162).

Traver Community Plan 2014 Update

Advisory Council on Historic Preservation, which were accessed September 19, 2017 at:
National Historic Preservation Program: Overview: http://www.achp.gov/overview.html.
National Register Evaluation Criteria: http://www.achp.gov/nrcriteria.html.
State Historic Preservation Officers: http://www.achp.gov/shpo.html.

California State Parks, Office of Historic Preservation, which were accessed at:
About the CHRIS: http://ohp.parks.ca.gov/?page_id=1068.
About the CHRIS Inventory: http://ohp.parks.ca.gov/?page_id=28063.
California Historical Landmarks: http://ohp.parks.ca.gov/?page_id=21387.
California Register: http://www.ohp.parks.ca.gov/?page_id=21238.
Mission and Responsibilities: http://ohp.parks.ca.gov/?page_id=1066

"*Cultural Resources Assessment, Proposed Planning Study Area for the Traver Community Plan Update, Tulare County, California*" C.K. Roper 2014 (included as part of Appendix "C" of this document).

Chapter 3.6

Geology and Soils

SUMMARY OF FINDINGS

The Preferred/Proposed Project would result in ***Less Than Significant Impacts*** related to Geology and Soils, and therefore, no mitigation measures are required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

CEQA Guidelines Requirements for Evaluation of Impacts to Geology and Soils

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Geology and Soils. As required in Guidelines Section 15126, all phases of the Project would be considered as part of the potential environmental impact.

As noted in Guidelines Section 15126.2(a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project may cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

[1] CEQA Guidelines Section 15126.2

The environmental setting provides a description of the Geology and Soils in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

DEFINITIONS

Fault: *"A fault is a fracture in the Earth's crust that is accompanied by displacement between the two sides of the fault. An active fault is defined as a fracture that has shifted in the last 10,000 to 12,000 years (Holocene Period). A potentially active fault is one that has been active in the past 1.6 million years (Quaternary Period). A sufficiently active fault is one that shows evidence of Holocene displacement on one or more of its segments or branches (Hart, 1997)."*[2]

Liquefaction: *"Liquefaction in soils and sediments occurs during earthquake events, when soil material is transformed from a solid state to a liquid state, generated by an increase in pressure between pore space and soil particles. Earthquake-induced liquefaction typically occurs in low-lying areas with soils or sediments composed of unconsolidated, saturated, clay-free sands and silts, but it can also occur in dry, granular soils or saturated soils with partial clay content."*[3]

Magnitude: *"Earthquake magnitude is measured by the Richter scale, indicated as a series of Arabic numbers with no theoretical maximum magnitude. The greater the energy released from the fault rupture, the higher the magnitude of the earthquake. Magnitude increases logarithmically in the Richter scale; thus, an earthquake of magnitude 7.0 is thirty times stronger than one of magnitude 6.0. Earthquake energy is most intense at the point of fault slippage, the epicenter, which occurs because the energy radiates from that point in a circular wave pattern. Like a pebble thrown in a pond, the increasing distance from an earthquake's epicenter translates to reduced ground-shaking."*[4]

CEQA THRESHOLDS OF SIGNIFICANCE

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds of significance:

- Whether the project is located on a fault line

[2] Tulare County General Plan 2030 Update, *Appendix B General Plan Background Repor*t. Page 8-2.
[3] Ibid.
[4] Ibid.

- Whether the project will create a hazard to people or property
- If the project site subject to landslides
- IF the project site is located on a liquefaction zone

ENVIRONMENTAL SETTING

"Seismicity varies greatly between the two major geologic provinces represented in Tulare County. The Central Valley is an area of relatively low tectonic activity bordered by mountain ranges on either side. The Sierra Nevada Mountains, partially located within Tulare County, are the result of movement of tectonic plates which resulted in the creation of the mountain range. The Coast Range on the west side of the Central Valley is also a result of these forces, and the continued uplifting of Pacific and North American tectonic plates continues to elevate these ranges. The remaining seismic hazards in Tulare County generally result from movement along faults associated with the creation of these ranges."[5]

"Earthquakes are typically measured in terms of magnitude and intensity. The most commonly known measurement is the Richter Scale, a logarithmic scale which measures the strength of a quake. The Modified Mercalli Intensity Scale measures the intensity of an earthquake as a function of the following factors:

- Magnitude and location of the epicenter;
- Geologic characteristics;
- Groundwater characteristics;
- Duration and characteristic of the ground motion;
- Structural characteristics of a building."[6]

"Faults are the indications of past seismic activity. It is assumed that those that have been active most recently are the most likely to be active in the future. Recent seismic activity is measured in geologic terms. Geologically recent is defined as having occurred within the last two million years (the Quaternary Period). All faults believed to have been active during Quaternary time are considered "potentially active."[7]

"Settlement can occur in poorly consolidated soils during ground-shaking. During settlement, the soil materials are physically rearranged by the shaking and result in reduced stabling alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to ground-shaking is not available. Fluctuating groundwater levels also may have changed the local soil characteristics. Sufficient subsurface data is lacking

[5] Tulare County General Plan 2030 Update, *Appendix B General Plan Background Report*. Page 8-5.
[6] Ibid.
[7] Op. Cit.

to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists in Tulare County."[8]

"Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground-shaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits. Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. Such damage occurred in San Francisco on bay-filled areas during the 1989 Loma Prieta earthquake, even though the epicenter was several miles away. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation, such as that which occurred along the coastline near Seward, Alaska during the 1964 earthquake. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted."[9]

Earthquake Hazards

"Ground-shaking is the primary seismic hazard in Tulare County because of the county's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of ground-shaking, which is directly related to the magnitude of a quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased ground-shaking over longer periods of time, thereby affecting a larger area. Ground-shaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by population. The valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake."[10]

"There are three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- **San Andreas Fault** is located approximately 40 miles west of the Tulare County boundary and [approximately] 60 miles west of the Community of Traver. This fault has a long history of activity, and is thus the primary focus in determining seismic activity

[8] Op. Cit. 8-9.
[9] Op. Cit.
[10] Op. Cit.

within the County. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west of Tulare County lays the "Central California Active Area," section of the San Andreas Fault where many earthquakes have originated.

- **Owens Valley Fault Group** is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains approximately [approximately] 60 miles east of the Project area. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.

- **Clovis Fault** is considered to be active within the Quaternary Period, although there is no historic evidence of its activity, and is therefore classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County and [approximately] 70 miles north of the project area. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts. [11]

There are other unnamed faults north of Bakersfield and near Tulare Buttes about 30 miles north of Porterville. These faults are small and have exhibited activity in the last 1.6 million years, but not in the last 200 years. It is also possible, but unlikely, that previously unknown faults could become active in the area. [12] No Alquist-Priolo Earthquake Fault Zones or known active faults are in or near the Project area. [13]

Soils and Liquefaction

"The San Joaquin Valley portion of Tulare County is located on alluvial deposits, which tend to experience greater ground-shaking intensities than areas located on hard rock. Therefore, structures located in the valley will tend to suffer greater damage from ground-shaking than those located in the foothill and mountain areas. However, existing alluvium valleys and weathered or decomposed zones are scattered throughout the mountainous portions of the county which could also experience stronger intensities than the surrounding solid rock areas. The geologic characteristics of an area can therefore be a greater hazard than its distance to the epicenter of the quake."[14]

"No specific countywide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are

[11] Op. Cit. 3.7-5; and *Tulare County, Revised Draft General Plan 2030 Update,* August 2012. Page 10-7.
[12] *Tulare County, Revised Draft General Plan 2030 Update,* August 2012. Page 10-15.
[13] California Geological Survey, http://www.quake.ca.gov/gmaps/WH/regulatorymaps.htm
[14] Ibid. 8-7.

located in a small section of the Sierra Nevada Mountains along the Tulare-Inyo County boundary. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well. Detailed geotechnical engineering investigations would be necessary to more accurately evaluate liquefaction potential in specific areas and to identify and map the areal extent of locations subject to liquefaction."[15]

"Soils underlying the community and surrounding vicinity have been mapped by the U.S. Department of Agriculture Soil Conservation Service. Generally, these soils are sandy loams which have significant amounts of clay in the surface layers. These soils absorb water slowly and are alkaline in nature. At depths below three to 3-½ feet hardpan was encountered which was sufficiently dense that it could not be penetrated with a hand power auger or hand auger. The areas around Traver with Traver fine sandy loam soils are classified in capability Class II, and are considered prime agricultural land. Most of the other soils around Traver are Class III."[16]

Landslides

"Landslides are a primary geologic hazard and are influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces)."[17]

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the Project.

State Agencies & Regulations

California Building Code

"The California Building Code is another name for the body of regulations known as the California Code of Regulations (C.C.R.), Title 24, Part 2, which is a portion of the California Building Standards Code. Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards."[18]

[15] Op. Cit. 8-9.
[16] Tulare County Traver Community Plan 2014 Update. October 2014. Page 15.
[17] Op. Cit. 8-10.
[18] Op. Cit. 8-3.

Alquist-Priolo Earthquake Fault Zoning Act

"The Alquist- Priolo Earthquake Fault Zoning Act (formerly the Alquist- Priolo Special Studies Zone Act), signed into law December 1972, requires the delineation of zones along active faults in California. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazards associated with fault rupture and to prohibit the location of most structures for human occupancy across these traces."[19]

State Water Resources Control Board and Regional Water Quality Control Board

National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity- Water Quality Order 99-08 DWQ.

Typically, General Construction Storm Water NPDES permits are issued by the RWQCB for grading and earth-moving activities. The General Permit is required for construction activities that disturb one or more acres. The General Permit requires development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which specifies practices that include prevention of all construction pollutants from contacting stormwater with the intent of keeping all products of erosion form moving off site into receiving waters. The NPDES permits are issued for a five-year term. NPDES general permits require adherence to the Best Management Practices (BMPs) including:

- Site Planning Consideration- such as preservation of existing vegetation.
- Vegetation Stabilization- through methods such as seeding and planting.
- Physical Stabilization- through use of dust control and stabilization measures.
- Diversion of Runoff – by utilizing earth dikes and temporary drains and swales.
- Velocity Reduction – through measures such as slope roughening/terracing.
- Sediment Trapping/Filtering – through use of silt fences, straw bale and sand bag filters, and sediment traps and basins.

Local Policies & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below.

HS-1.2 Development Constraints - The County shall permit development only in areas where the potential danger to the health and safety of people and property can be mitigated to an acceptable level.

[19] Op. Cit.

HS-1.3 Hazardous Lands - The County shall designate areas with a potential for significant hazardous conditions for open space, agriculture, and other appropriate low intensity uses.

HS-1.5 Hazard Awareness and Public Education - The County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures.

HS-1.11 Site Investigations - The County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding.

HS-2.1 Continued Evaluation of Earthquake Risks - The County shall continue to evaluate areas to determine levels of earthquake risk.

HS-2.4 Structure Siting - The County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.

HS-2.7 Subsidence - The County shall confirm that development is not located in any known areas of active subsidence. If urban development may be located in such an area, a special safety study will be prepared and needed safety measures implemented. The County shall also request that developments provide evidence that its long-term use of ground water resources, where applicable, will not result in notable subsidence attributed to the new extraction of groundwater resources for use by the development.

HS-2.8 Alquist-Priolo Act Compliance - The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones (pursuant to and as determined by the Alquist-Priolo Earthquake Fault Zoning Act; Public Resource code, Chapter 7.5) unless the specific provision of the Act and Title 14 of the California Code of Regulations have been satisfied.

WR-2.2 NPDES Enforcement - 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 Best Management Practices - 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.

WR-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

IMPACT EVALUATION

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

There are no known active earthquake faults within the Project area. There are, however, three faults within the region that have been, and will be, principal sources of potential seismic activity within Tulare County. These faults are described below:

- San Andreas Fault is located approximately 40 miles west of the Tulare County boundary. This fault has a long history of activity, and is thus the primary focus in determining seismic activity within the County. Seismic activity along the fault varies along its span from the Gulf of California to Cape Mendocino. Just west of Tulare County lays the "Central California Active Area," section of the San Andreas Fault where many earthquakes have originated.

- Owens Valley Fault Group is a complex system containing both active and potentially active faults, located on the eastern base of the Sierra Nevada Mountains approximately 70 miles east of the Project area. The Group is located within Tulare and Inyo Counties and has historically been the source of seismic activity within Tulare County.

- Clovis Fault is considered to be active within the Quaternary Period, although there is no historic evidence of its activity, and is therefore classified as "potentially active." This fault lies approximately six miles south of the Madera County boundary in Fresno County and approximately 50 mile north of the project area. Activity along this fault could potentially generate more seismic activity in Tulare County than the San Andreas or Owens Valley fault systems. In particular, a strong earthquake on the Fault could affect northern Tulare County. However, because of the lack of historic activity along the Clovis Fault, inadequate evidence exists for assessing maximum earthquake impacts. [20][21]

There are other unnamed faults north of Bakersfield and near Tulare Buttes, about 30 miles north of Porterville. These faults are small and have exhibited activity in the last 1.6 million years, but not in the last 200 years. It is also possible, but unlikely, that previously unknown faults could become active in the area. No Alquist-Priolo Earthquake

[20] Ibid. 3.7-5.
[21] *Tulare County, Revised Draft General Plan 2030 Update,* August 2012. Page 10-7.

Fault Zones or known active faults are in or near the Project area. Therefore, Project-specific impacts would be ***Less Than Significant***.

i) Strong seismic ground shaking?

Ground shaking is the primary seismic hazard in Tulare County because of the County's seismic setting and its record of historical activity. Thus, emphasis focuses on the analysis of expected levels of ground shaking, which is directly related to the magnitude of a specific quake and the distance from a quake's epicenter. Magnitude is a measure of the amount of energy released in an earthquake, with higher magnitudes causing increased ground shaking over longer periods of time, thereby affecting a larger area. Ground shaking intensity, which is often a more useful measure of earthquake effects than magnitude, is a qualitative measure of the effects felt by the population.

The common way to describe ground motion during an earthquake is with the motion parameters of acceleration and velocity in addition to the duration of the shaking. A common measure of ground motion is the peak ground acceleration (PGA), which is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. The Project is located in an area that may experience 10 to 20% PGA.

The Project area is located in a seismic zone which is sufficiently far from known faults and consists primarily of a stable geological formation. Project-specific hazards due to ground shaking would be ***Less Than Significant***.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged ground shaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are low to medium density. In addition to necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction. Scientific studies have shown that the ground acceleration must approach 0.3 g before liquefaction occurs in a sandy soil with relative densities typical of the San Joaquin alluvial deposits.

Liquefaction during major earthquakes has caused severe damage to structures on level ground as a result of settling, tilting, or floating. If liquefaction occurs in or under a sloping soil mass, the entire mass may flow toward a lower elevation. Also of particular concern in terms of developed and newly developing areas are fill areas that have been poorly compacted.

No specific county-wide assessments to identify liquefaction hazards have been performed in Tulare County. Areas where groundwater is less than 30 feet below the surface occur primarily in the San Joaquin Valley portion of the County. However, soil

types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. [22]

As the proposed Project area is sufficiently far from known faults and consists primarily of a stable geological formation, it is unlikely to be subject to seismically-induced liquefaction. As such, Project-specific effects would result in a ***Less Than Significant Impact***.

iv) Landslides?

Landslides are a geologic hazard influenced by four factors:

- Strength of rock and resistance to failure, which is a function of rock type (or geologic formation);
- Geologic structure or orientation of a surface along which slippage could occur;
- Water (can add weight to a potentially unstable mass or influence strength of a potential failure surface); and,
- Topography (amount of slope in combination with gravitation forces).

Tulare County has three geologic environments: the valley, foothills, and mountains. The range in topography between these three areas presents a range of landslide hazards. As of June 2009, the California Geological Survey had not developed landslide hazard identification maps for Tulare County. However, it is reasonable to assume that certain areas in Tulare County are more prone to landslides than others. Such areas can be found in foothill and mountain areas where fractured and steep slopes are present (as in the Sierra Nevada Mountains), where less consolidated or weathered soils overlie bedrock, or where inadequate ground cover accelerates erosion. Additionally, development grading operations can create unstable slopes due to cut and fill activities.

There is the potential for small slides and slumping along the steep banks of rivers or creeks; in particular along the Kaweah, Kings, and Tule River bluffs. However, as the Project area is not near any of these areas and is situated on relatively flat topography, there is no risk of landslides within or near the Project area.

The Project is unlikely to be subject to landslides. Therefore, Project-specific impacts would result in a ***No Impact***.

Project Impact Analysis: ***Less Than Significant Impact***

The existing area of the Project is not located within a published Earthquake Fault Zone and the potential for ground rupture is low. As earthquakes are possible throughout the State of California, the Project would be required to comply with the Tulare County General Plan and Zone II of the Uniform Building Code. In addition, the Project area is not located within an area mapped to have a potential for soil liquefaction. As the Project area is relatively flat, there is no potential for landslides. Therefore, the Project would result in a ***Less Than Significant Project-Specific Impact*** related to this Checklist Item.

[22] *Tulare County, 2030 General Plan Update, Recirculated Draft Environmental Impact Report*, February 2010. Page 3.7-7.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Project would not increase geotechnical related impacts off-site. The Project would result in ***Less Than Significant Cumulative Impact*** related to this Checklist Item.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Project-specific impacts would result in a ***Less Than Significant Impact***. Therefore, the Project would result in ***No Cumulative Impact.***

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

Project Impact Analysis: ***Less Than Significant Impact***

According to the USDA Natural Resources Conservation Service Web Soil Survey, the majority of the proposed Project site consists of soil classified as Calgro-Calgro, saline-Sodic complex, 0-2 percent slopes, with a small area consisting of Youd Loam, 0 to 1 percent slopes. Both soils were formed in alluvium derived mainly from granitic rocks; however, the Calgro soil is considered moderately-well-drained soil while Youd Loam is considered somewhat poorly drained.

While impacts are anticipated to be less than significant, the Clean Water Act (CWA) and the Central Valley Regional Water Quality Control Board (CVRWQCB) require a Stormwater Pollution Prevention Plan (SWPPP) to be developed by a qualified engineer or erosion control specialist and implemented before construction begins. The SWPPP would be kept on site during construction activity and would be made available upon request to representatives of the CVRWQCB. The objectives of the SWPPP would be to identify pollutant sources that may affect the quality of stormwater associated with construction activity and to identify, construct, and implement stormwater pollution prevention measures to reduce pollutants in stormwater discharges during and after construction. To meet these objectives, the SWPPP would include a description of potential pollutants, a description of methods of management for dredged sediments, and hazardous materials present on site during construction (including vehicle and equipment fuels). The SWPPP would also include details for best management practices (BMPs) for the implementation of sediment and erosion control practices. Implementation of the SWPPP would comply with state and federal water quality regulations and would reduce this impact to a less-than-significant level. Compliance with local grading and erosion control ordinances would also help minimize adverse effects associated with erosion and

sedimentation. Any stockpiled soils would be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction and reclamation. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction and reclamation periods are not anticipated. Therefore, Project-specific impacts would result in a ***Less Than Significant Impact.***

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or the Tulare County 2030 General Plan EIR.

As discussed earlier in Item b), the Project shall, as applicable, comply with state and federal laws which require that a SWPPP be prepared and implemented to ensure impacts are Less Than Significant. With implementation of a SWPPP, the Project would result in ***No Cumulative Impact*** related to this Checklist Item.

The Project would not result in significant impacts with implementation of a SWPPP. Therefore, cumulative impacts would result in a ***Less Than Significant Impact***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific and cumulative impacts related to this Checklist Item would result in a ***Less Than Significant Impact***.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Project Impact Analysis: ***Less Than Significant Impact***

The Project is unlikely to be subject to 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. The foothill and mountain areas of the County are more likely to experience landslides than the Valley floor. Susceptible areas include areas where fractured and steep slopes are present or where inadequate ground cover accelerates erosion. Erosion and ground slumping of soils can also occur along bluff and banks of the Kaweah, Kings, and Tule Rivers. The probability of soil liquefaction actually taking place in the County is considered as low-to-moderate hazard. Soil types in the area are not conducive to liquefaction because they are either too coarse or too high in clay content. However, due to the high clay content, there is potential for

some subsidence to occur. Impacts related to these types of geological hazards are site specific and need to be evaluated on a site by site basis. [23]

With adherence to all applicable State and local building codes and regulations and implementation of the policies contained in the draft Health and Safety Element, impacts associated with on- or off-site landslide, subsidence, liquefaction, or collapse would be minimized. Subsequently, with implementation of the required policies noted below, Project-specific impacts would be ***Less Than Significant***. [24]

As noted earlier, Tulare County General Plan Policies designed to minimize geologic hazard impacts to people and structures in the County include the following:

- HS-1.2 Development Constraints
- HS-1.3 Hazardous Lands
- HS-1.5 Hazard Awareness and Public Education
- HS-1.11 Site Investigations

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Project would have a minor impact on soil compaction. As a result, the Project would result in a ***Less Than Significant Cumulative Impact***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific and cumulative impacts related to this Checklist Item would be ***Less Than Significant***.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Project Impact Analysis: ***Less Than Significant Impact***

Expansive soils possess a shrink-swell characteristic which is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually the result of inadequate soil and foundation engineering, or the placement of structures directly on expansive soils.

[23] *Tulare County, 2030 General Plan Update, Recirculated Draft Environmental Impact Report*, February 2010. Page 3.7-22.
[24] *Tulare County, Revised Draft General Plan 2030 Update,* August 2012. Pages 10-5 and 10-6.

According to the Traver Community Plan prepared in 2014, the soils in the proposed Project area are sandy loams which have significant amounts of clay in the surface layers. These soils absorb water slowly and are alkaline in nature.

The Tulare County General Plan, Health and Safety Element includes several policies and implementation measures that have been developed to ensure a safe environment for residents, visitors, and businesses. For example, policies include continued compliance with all applicable development requirements including the California Building Code (see Policies HS-1.4) and the restriction of development within a variety of hazardous areas (see Policies HS-1.2 and HS-1.3). Policy HS-1.5 promotes the awareness and education of residents about natural hazards, including soil conditions. Policy HS-1.11 requires the preparation of engineering studies for all new development proposals within areas of potential soil instability.

With adherence to these codes and regulations and implementation of the policies contained in the Health and Safety Element, geologic hazard impacts associated with expansive soils would be minimized. With implementation of required General Plan policies, there would be a ***Less Than Significant Project Specific Impact***.

As noted earlier, Tulare County General Plan Policies designed to minimize geologic hazard impacts to people and structures in the County include the following:

- HS-1.2 Development Constraints
- HS-1.3 Hazardous Lands
- HS-1.4 Building and Codes
- HS-1.5 Hazard Awareness and Public Education
- HS-1.11 Site Investigations

Cumulative Impact Analysis: ***Less Than Significant Impact***

Regional development would increase the number of people and structures subject to geologic- and soils-related risks. Compliance with federal, State and local regulations as well as General Plan policies would reduce building construction and run-off and erosion potential impacts associated with geology and soils to a less-than-significant level.

Federal, State and local regulations are designed to protect people and structures from increased hazards related to such issues as earthquakes, landslides and soil erosion. As a result, conformance with adopted California building codes, and other measures to protect people and structures from geologic hazards, would reduce this impact to a less than significant level. The Project's incremental contribution cumulative impacts would be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

The proposed Project would improve the existing Traver Community Wastewater system by extending the current pipeline network and making improvements to the treatment process system. Implementation of the Project would extend service to existing residents and businesses that are currently not being served, and to serve infill areas within the community that are expected to develop in the future consistent with the adopted Traver Community Plan. There would be no use of septic or alternative wastewater disposal systems. Therefore, there would be ***No impact*** to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

See Project Impact Analysis.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project -specific or Cumulative Impacts*** related to this Checklist Item would occur.

REFERENCES

CEQA Guidelines Section 15126.2

Tulare County General Plan 2030 Update, *Appendix B General Plan Background Report*

Tulare County General Plan 2030 Update and Final EIR (SCH # 2006041162).

Tulare County Resource Management Agency. Traver Community Plan 2014 Update. October 2014. Page 15.

State of California Department of Conservation, *Alquist-Priolo Earthquake Fault Zone Maps*, which was accessed September 19, 2017 at: http://www.quake.ca.gov/gmaps/ap/ap_maps.htm, Updated December 2010

Five County Seismic Safety Element, *Summary & Policy Recommendations II*, 3 and 15.

USGS, *Earthquake Hazards Program: Custom Mapping & Analysis Tools*, which was accessed June 8, 2017 at: https://earthquake.usgs.gov/hazards/qfaults/map/#qfaults

USGS. *Earthquake Hazards Program: Glossary*, which was accessed September 19, 2017 at: https://earthquake.usgs.gov/learn/glossary/.

Metcalf & Eddy, "Wastewater Engineering," third edition, Table 2-10

Chapter 3.7

Greenhouse Gas Emissions

SUMMARY OF FINDINGS

Based on the impact analysis below, potential impacts related to Greenhouse Gas generation as a result of the proposed Project are determined to be ***Less Than Significant***. Greenhouse Gas impacts from the Project have been compared to a similar project (Plainview) in Tulare County that were estimated using the Sacramento Metropolitan Air Quality Management District's Roadway Construction Emissions Model Version 7.1.5.1 (which is the preferred model for estimating emissions from linear construction projects) and is included as Appendix "A" of this Draft Environmental Impact Report (DEIR). As this Project is approximately 44% the size of Plainview's, it is reasonable to conclude that a less than significant impact would occur. The impact determinations in this chapter are supported by a review of potential impacts provided in the following analysis using the recommendations in the San Joaquin Valley Unified Air Pollution Control District's (Air District or SJVAPCD) *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and *District Policy APR 2015: Zero Equivalency Policy for Greenhouse Gases*.[1] Also, Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "D", *"Greenhouse Gas Analysis Report Traver Community Plan Update"* prepared by First Carbon Solutions is incorporated by reference.

INTRODUCTION

CEQA Requirements for Evaluation of Impacts to Greenhouse Gas Emissions

This section of the DEIR addresses potential impacts related to GHG emissions. As required in CEQA Guidelines §15126, all phases of the proposed Project would be considered as part of the potential environmental impact.

CEQA Guideline Section 15064.4 Determining the Significance of Impacts from Greenhouse Gas Emissions provides the following guidance for lead agencies in determining the significance of impacts from GHG emissions:

> "(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine,

[1] Air District APR 2015 can be found on the Air District's website at http://www.valleyair.org/policies_per/Policies/REVISEDAP2015.pdf.

in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the projects incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project."[2]

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist Item questions. A significant impact would occur if the project 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 adopted for the purpose of reducing the emissions of greenhouse gases."[3]

The San Joaquin Valley Unified Air Pollution Control District provides the following guidance to lead agencies for determining the cumulative significance of project specific GHG emissions on global climate change:

- "Projects determined to be exempt from the requirements of CEQA would be determined to have a less than significant individual and cumulative impact for GHG emissions and would not require further environmental review, including analysis of project specific GHG

[2] CEQA Guidelines, Section 15064.4
[3] Ibid. Appendix G: Environmental Checklist Form.

emissions. Projects exempt under CEQA would be evaluated consistent with established rules and regulations governing project approval and would not be required to implement BPS.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement BPS.
- Projects implementing Best Performance Standards would not require quantification of project specific GHG emissions. Consistent with CEQA Guideline, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing Best Performance Standards would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29%, compared to BAU, including GHG emission reductions achieved since the 2002-2004 baseline period. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.
- Notwithstanding any of the above provisions, projects requiring preparation of an Environmental Impact Report for any other reason would require quantification of project specific GHG emissions. Projects implementing BPS or achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG."[4]

ENVIRONMENTAL SETTING

"Gases that trap heat in the atmosphere are called greenhouse gases (GHGs). The major concern is that increases in GHGs are causing global climate change. Global climate change is a change in the average weather on earth that can be measured by wind patterns, storms, precipitation and temperature. The gases believed to be most responsible for global warming are water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)."[5] Nitrogen trifluoride was not listed initially in AB 32 but was subsequently added to the list via legislation. [6]

"For over the past 200 years, the burning of fossil fuels such as coal and oil, deforestation, and

[4] San Joaquin Valley Unified Air Pollution Control District, Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA. Pages 4 to 5.
[5] General Plan Background Report. Pages 6-19 to 6-20.
[6] California Air Resources Board. Assembly Bill 32 Overview. Website: http://www.arb.ca.gov/cc/ab32/ab32.htm. Accessed on September 20, 2017.

other sources have caused the concentrations of heat-trapping "greenhouse gases" to increase significantly in our atmosphere. These gases absorb some of the energy being radiated from the surface of the earth and trap it in the atmosphere, essentially acting like a blanket that makes the earth's surface warmer than it would be otherwise.

Greenhouse gases are necessary to life as we know it, because without them the planet's surface would be about 60ºF cooler than present. But, as the concentrations of these gases continue to increase in the atmosphere, the Earth's temperature is climbing above past levels. According to NOAA and NASA data, the Earth's average surface temperature has increased by about 1.2 to 1.4ºF since 1900. The ten warmest years on record (since 1850) have all occurred in the past 13 years (EPA 2009). Most of the warming in recent decades is very likely the result of human activities. Other aspects of the climate are also changing such as rainfall patterns, snow and ice cover, and sea level. "[7]

"In 2007, Tulare County generated approximately 5.2 million tonnes of CO_2e [carbon dioxide equivalents]. The largest portion of these emissions (63 percent) is attributed to dairies/feedlots, while the second largest portion (16 percent) is from mobile sources."[8] **Table 3.7-1** below, identifies Tulare County's emissions by sector in 2007.

Table 3.7-1
Emissions by Sector in 2007[9]

Sector	CO_2e (tonnes/year)	% of Total
Electricity	542,690	11%
Natural Gas	321,020	6%
Mobile Sources	822,230	16%
Dairy/Feedlots	3,294,870	63%
Solid Waste	227,250	4%
Total	**5,208,060**	**100%**
Per Capita	**36.1**	

"In 2030, Tulare County is forecast to generate approximately 6.1 million tonnes of CO_2e. The largest portion of these emissions (59 percent) is attributed to dairies/feedlots, while the second largest portion (20 percent) is from mobile sources. … Per capita emissions in 2030 are projected to be approximately 27 tonnes of CO_2e per resident"[10].

[7] United States Environmental Protection Agency, National Greenhouse Gas Emissions Data. Page 1-2. Website https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean. Accessed September 20, 2017. EPA reference includes: Technical Support Document for the Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act. U.S. Environmental Protection Agency. December 2009.
[8] General Plan 2030 Update Background Report. Page 6-36.
[9] Ibid. 6-38.
[10] Op. Cit.

Table 3.7-2 Emissions by Sector in 2030[11]		
Sector	**CO_2e (tonnes/year)**	**% of Total**
Electricity	660,560	11%
Natural Gas	384,410	6%
Mobile Sources	1,212,370	20%
Dairy/Feedlots	3,601,390	59%
Solid Waste	246,750	4%
Total	**6,105,480**	**100%**
Per Capita	**27.4**	

The Tulare County General Plan 2030 Update Background Report contains the following: "Enhancement of the greenhouse effect can occur when concentrations of GHGs exceed the natural concentrations in the atmosphere. Of these gases, CO_2 and methane are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF_6 is a GHG commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. There is widespread international scientific agreement that human-caused increases in GHGs has and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming.

Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved

[11] Op. Cit.

are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great."[12]

REGULATORY SETTING

Applicable Federal, State, Regional, and local regulations specific to greenhouse gas resources are described below. The following environmental regulatory settings were summarized, in part, from information contained in the Tulare County 2030 General Plan Update Background Report, Tulare County 2030 General Plan Update Recirculated Draft Environmental Impact Report (RDEIR), the California Air Resources Board (ARB) website, and the United States Environmental Protection Agency (US EPA) website.

Federal Agencies & Regulations

United States Environmental Protection Agency (US EPA)

"The primary sources of greenhouse gas emissions in the United States are:

- **Electricity production** (31% of 2013 greenhouse gas emissions) - Electricity production generates the largest share of greenhouse gas emissions. Approximately 67% of our electricity comes from burning fossil fuels, mostly coal and natural gas. [2]
- **Transportation** (27% of 2013 greenhouse gas emissions) - Greenhouse gas emissions from transportation primarily come from burning fossil fuel for our cars, trucks, ships, trains, and planes. Over 90% of the fuel used for transportation is petroleum based, which includes gasoline and diesel. [3]
- **Industry** (21% of 2013 greenhouse gas emissions) - Greenhouse gas emissions from industry primarily come from burning fossil fuels for energy as well as greenhouse gas emissions from certain chemical reactions necessary to produce goods from raw materials.
- **Commercial and Residential** (12% of 2013 greenhouse gas emissions) - Greenhouse gas emissions from businesses and homes arise primarily from fossil fuels burned for heat, the use of certain products that contain greenhouse gases, and the handling of waste.
- **Agriculture** (9% of 2013 greenhouse gas emissions) - Greenhouse gas emissions from agriculture come from livestock such as cows, agricultural soils, and rice production.
- **Land Use and Forestry** (offset of 13% of 2013 greenhouse gas emissions) - Land areas can act as a sink (absorbing CO_2 from the atmosphere) or a source of greenhouse gas emissions. In the United States, since 1990, managed forests and other lands have absorbed more CO_2 from the atmosphere than they emit."[13]

[12] General Plan 2030 Update Background Report. Page 6-31. Background Report citations include: ARB website: http://www.arb.ca.gov/cc/120106workshop/intropres12106.pdf (accessed July 2008) and IPCC website: http://www.grida.no/climate/ipcc%5Ftar/wg1/032.htm#f5 (accessed July 2008).

[13] United States Environmental Protection Agency. Sources of Greenhouse Gas Emissions. Website: https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions . Accessed September 20, 2017.

Greenhouse Gas Endangerment Finding

"On December 7, 2009, Administrator Lisa Jackson signed a final action, under Section 202(a) of the Clean Air Act, finding that six key well-mixed greenhouse gases constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to the climate change problem."[14]

"On December 7, 2009, the Administrator signed two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases — carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) — in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare."[15]

State Agencies & Regulations

California Clean Air Act

"The California CAA of 1988 establishes an air quality management process that generally parallels the federal process. The California CAA, however, focuses on attainment of the State ambient air quality standards,…which, for certain pollutants and averaging periods, are more stringent than the comparable federal standards. Responsibility for meeting California's standards is addressed by the CARB and local air pollution control districts (such as the eight county SJVAPCD, which administers air quality regulations for Tulare County). Compliance strategies are presented in district-level air quality attainment plans."[16]

Executive Order S-3-05

"In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger issued Executive Order S-3-05, which sets forth a series of target dates by which statewide emission of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.

[14] United States Environmental Protection Agency. Regulatory Initiatives. Website: http://www3.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html. Accessed on November 17, 2015.
[15] United States Environmental Protection Agency. Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act. Website: http://www3.epa.gov/climatechange/endangerment/. Accessed on November 17, 2015
[16] Tulare County General Plan 2030 Update RDEIR. Pages 3.3-2 to 3.3-3.

- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order additionally ordered that the Secretary of the California Environmental Protection Agency (Cal EPA) would coordinate oversight of the efforts among state agencies made to meet the targets and report to the Governor and the State Legislature biannually on progress made toward meeting the GHG emission targets. Cal EPA was also directed to report biannually on the impacts to California of global warming, including impacts to water supply, public health, agriculture, the coastline, and forestry, and prepare and report on mitigation and adaptation plans to combat these impacts.

In response to the Executive Order, the Secretary of Cal EPA created the Climate Action Team (CAT), composed of representatives from the Air Resources Board; Business, Transportation, & Housing; Department of Food and Agriculture; Energy Commission; California Integrated Waste Management Board (CIWMB); Resources Agency; and the Public Utilities Commission (PUC). The CAT prepared a recommended list of strategies for the state to pursue to reduce climate change emission in the state (Climate Action Team, 2006)."[17]

Assembly Bill 32: California Global Warming Solutions Act of 2006

"In 2006, California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500, et seq.), which requires the CARB to design and implement emission limits, regulations, and other measures, such that feasible and cost-effective statewide GHG emissions are reduced to 1990 levels by 2020.

The bill also requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. The bill authorizes CARB to adopt market-based compliance mechanisms. The bill additionally requires the state board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism adopted by the state board, pursuant to specified provisions of existing law. The bill also authorizes CARB to adopt a schedule of fees to be paid by regulated sources of GHG emissions. Because the bill requires CARB to establish emissions limits and other requirements, the violation of which would be a crime, this bill would create a state-mandated local program.

Under AB 32, by June 30, 2007, CARB was to identify a list of discrete early action GHG reductions that will be legally enforceable by 2010. By January 1, 2008, CARB was also to adopt regulations that will identify and require selected sectors to report their statewide GHG emissions. By January 1, 2011, CARB must adopt rules and regulations to achieve the maximum technologically feasible and cost-effective reductions in GHG reductions. CARB is authorized to enforce compliance with the program that it develops."[18]

Senate Bill 97

[17] Tulare County General Plan 2030 Update Background Report. Pages 6-21 to 6-22. Background Report citation: Climate Action Team Report to Governor Schwarzenegger and the Legislature. March 2006.
[18] Ibid. 6-22 to 6-23

"Governor Schwarzenegger signed Senate Bill (SB) 97 (Sutton), a CEQA and GHG emission bill, into law on August 24, 2007. SB 97 requires the Governor's Office of Planning and Research (OPR) to prepare CEQA guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. OPR must prepare these guidelines and transmit them to the Resources Agency by July 1, 2009. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions. The Resources Agency must then certify and adopt the guidelines by January 1, 2010. OPR and the Resources Agency are required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.

The OPR published a Technical Advisory in June of 2008 that is an "informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents" to serve in the interim until guidelines are established pursuant to SB 97 (OPR, 2008). This Advisory recommends that CEQA documents include quantification of estimated GHG emissions associated with a proposed project and that a determination of significance be made. With regard to significance the Advisory states that "lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a "significant impact", individual lead agencies may undertake a project-by-project analysis, consistent with the available guidance and current CEQA practice".[19]

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG emission reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.[20]

[19] Op. Cit. 6-26 to 6-27. Background Report citation: Technical Advisory – CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review. June 19, 2008.
[20] Senate Bill 375 (Steinberg). Website: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200720080SB375. Accessed September 19, 2017.

California Air Resources Board (ARB or CARB)

"The Air Resources Board (ARB or Board) has established State ambient air quality standards (State standards) to identify outdoor pollutant levels considered safe for the public. After State standards are established, State law requires ARB to designate each area as attainment, nonattainment, or unclassified for each State standard. The area designations, which are based on the most recent available data, indicate the healthfulness of air quality throughout the State."[21] On July 22, 2004, The California Air Resources Board adopted the 2004 Revisions to the California State Implementation Plan for Carbon Monoxide[22].

Climate Change Scoping Plan

"The CARB published a *Climate Change Scoping Plan* in December 2008 (CARB, 2008c) that outlines reduction measures to lower the state's GHG emissions to meet the 2020 limit. The *Scoping Plan* "proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health". Key elements for reducing California's GHG emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation."[23]

Regional Agency Policy and Regulations

California Air Pollution Control Officers Association (CAPCOA)

[21] California Air Resources Board. Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm. Accessed September 20, 2017
[22] California Air Resources Board. 2004 Revisions to the California State Implementation Plan for Carbon Monoxide. Website: http://www.arb.ca.gov/planning/sip/co/co.htm. Accessed September 20, 2017
[23] Tulare County General Plan 2030 Update Background Report. Pages 6-27 to 6-28. Background Report citation: Climate Change Proposed Scoping Plan. October 2008.

"In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating GHG emissions under CEQA (CAPCOA, 2008). The CAPCOA white paper strategies are not guidelines and have not been adopted by any regulatory agency; rather, the paper is offered as a resource to assist lead agencies in considering climate change in environmental documents."[24]

The California Association of Air Pollution Control Officers (CAPCOA) represents all thirty-five local air quality agencies throughout California. CAPCOA, which has been in existence since 1975, is dedicated to protecting the public health and providing clean air for all our residents and visitors to breathe, and initiated the Greenhouse Gas Reduction Exchange.[25]

"The Greenhouse Gas Reduction Exchange (GHG Rx) is a registry and information exchange for greenhouse gas emissions reduction credits designed specifically to benefit the state of California. The GHG Rx is a trusted source of locally generated credits from projects within California, and facilitates communication between those who create the credits, potential buyers, and funding organizations."[26] Four public workshops were held throughout the state including in the SJVAPCD. The mission is to provide a trusted source of high quality California-based greenhouse gas credits to keep investments, jobs, and benefits in-state, through an Exchange with integrity, transparency, low transaction costs and exceptional customer service.[27]

San Joaquin Valley Unified Air Pollution Control District (Air District)

"The San Joaquin Valley Air Pollution Control District is a public health agency whose mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality-management strategies."[28] "The San Joaquin Valley Air Pollution Control District is made up of eight counties in California's Central Valley: San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and the San Joaquin Valley Air Basin portion of Kern."[29]

The Air District has established a menu of performance standards, some of which depend on the existence of an adopted climate action plan or the establishment of Best Performance Standards (BPS). The Air District's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA* document provides guidance to lead agencies for evaluating the significance of project-specific and cumulative impacts related to GHG emissions. As discussed above in the Thresholds of Significance discussion, the Air District has determined

[24] Op. Cit. Page 6-28. Background Report citation: CEQA and Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January 2008.
[25] California Air Pollution Control Officers Association. Website: http://www.capcoa.org/. Accessed on September 20, 2017.
[26] Ibid.
[27] California Air Pollution Control Officers Association. CAPCOA Greenhouse Gas Reduction Exchange. Website: http://www.ghgrx.org/. Accessed September 20 2017.
[28] San Joaquin Valley Air Pollution Control District. About the District. Website: http://www.valleyair.org/General_info/aboutdist.htm#Mission. Accessed September 20, 2017.
[29] Ibid.

that the quantification of GHG emissions is expected for all projects that require an Environmental Impact Report.[30]

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County that support reduction efforts of GHG. General Plan policies that relate to the proposed Project are listed as follows:

AQ-1.3 Cumulative Air Quality Impacts - 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 Air Quality Land Use Compatibility - 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-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code Section 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 determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan - 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.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,

2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and

[30] San Joaquin Valley Air Pollution Control District Policy, Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Project under CEQA. Pages 3 to 5.

3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions - The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

Tulare County Climate Action Plan

"The Tulare County Climate Action Plan (CAP) serves as a guiding document for County of Tulare ("County") actions to reduce greenhouse gas emissions and adapt to the potential effects of climate change. The CAP is an implementation measure of the 2030 General Plan Update. The General Plan provides the supporting framework for development in the County to produce fewer greenhouse gas emissions during Plan buildout. The CAP builds on the General Plan's framework with more specific actions that will be applied to achieve emission reduction targets consistent with California legislation."[31]

IMPACT EVALUATION

Would the project:

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

Project Impact Analysis: ***Less Than Significant Impact***

The Project would generate GHG emissions through construction-related activities and maintenance-related activities. The period of construction would be short-term, and construction-phase GHG emissions would occur directly from the off-road heavy-duty equipment and the on-road motor vehicles needed to mobilize crew, equipment, and materials, and to construct the pipeline.

According to the Air District's *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* (Agency Guidance), projects implementing Best Performance Standards (BPS) in accordance with District guidance are determined to have a less than significant individual and cumulative impact on global climate change and do not require project specific quantification of GHG emissions. The Agency Guidance also states that projects not implementing BPS should quantify emissions and any project demonstrating a 29% reduction in GHG emissions as compared to business-as-usual (BAU) would have a less than significant impact.[32] The Air District's policy *APR 2015: Zero*

[31] Tulare County Climate Action Plan. Page 1
[32] San Joaquin Valley Air Pollution Control District, Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA. Pages 4 to 5.

Equivalency Policy for Greenhouse Gases has determined that projects emitting less than 230 metric tons of CO_2e per year is considered to have a less than significant impact.[33]

As the Air District has not established BPS for construction-type projects (such as the Project) GHG emissions were estimated using the Sacramento Metropolitan Air Quality Management District's Roadway Construction Emissions Model Version 7.1.5.1 (see Appendix "A" of this DEIR). As construction emissions are short-term in nature, generation of GHG emissions would cease upon completion of the Project. Consistent with Air District procedures for determining construction related impacts for stationary sources, Project-related GHG emissions were amortized over the projected life of the pipeline. Wastewater facility pipelines are typically specified for a 50-year life; however, for a conservative estimate, emissions have been amortized assuming a 30-year life.

The emissions model for the Plainview Wastewater System Project indicates that the Project would emit 1,012.7 tons of GHG emissions during construction operations. As noted earlier, as the Traver Community Wastewater System Project is approximately 44% the size of Plainview, it would likely result in approximately 445.59 tons (which is 44% of 1,012.7 tons). Therefore, the 30-year amortized GHG emissions are 14.85 tons/year (44% of 33.76 tons), which is below the Air District's zero-equivalency threshold. As such, a ***Less Than Significant Project-specific Impact*** related to this Checklist Item would occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. As the proposed Project would result in Less Than Significant Project-specific Impacts, ***Less Than Significant Cumulative Impacts*** would also occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, the Project would result in ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

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

Project Impact Analysis: ***No Impact***

The Project does not conflict with the Tulare Climate Action Plan, the Tulare County General Plan, the Air District Climate Change Action Plan, or any Air District rules/regulations, for the purpose of reducing greenhouse gas emissions.

[33] San Joaquin Valley Air Pollution Control District, APR 2015: Zero Equivalency Policy for Greenhouse Gases. Page 2.

The Project's objectives and components do not conflict with the goals of AB 32 and greenhouse gas reduction. Therefore, the Project is consistent with the aforementioned plans, policies, and regulations. As such, ***No Project-specific Impacts*** related to this Checklist Item would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley Air Basin. As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***Less Than Significant Cumulative Impacts*** related to this Checklist Item would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As the proposed Project is consistent with aforementioned plans, policies, and regulations, ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item would occur.

DEFINITIONS

As defined by SJVAPCD or Tulare County General Plan:

Achieved-in-Practice: "Any equipment, technology, practice or operation available in the United States that has been installed and operated or used at stationary source site for a reasonable period of time sufficient to demonstrate that the equipment, technology, practice or operation is reliable when operated in a manner that is typical for the process. In determining whether equipment, technology, practice or operation is Achieved-in-Practice, the District will consider the extent to which grants, incentives or other financial subsidies influence the economic feasibility of its use."[34]

Approved Alternate Technology: "Any District approved, Non-Achieved-in-Practice GHG emissions reduction measure equal to or exceeding the GHG emission reduction percentage for a specific BPS."[35]

Baseline: "The three year average (2002-2004) of GHG emissions for a type of equipment or operation within an identified class and category, expressed as annual GHG emissions per unit."[36]

Best Performance Standard: "For a specific Class and Category, the most effective, District approved, Achieved-In-Practice means of reducing or limiting GHG emissions from a GHG emissions source, that is also economically feasible per the definition of Achieved-in-Practice. BPS includes equipment type, equipment design, and operational and maintenance practices for the identified service, operation, or emissions unit class and category."[37]

Business-as-Usual: "The emissions for a type of equipment or operation within an identified class and category projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period."[38] "Total baseline emissions for all emissions sources within the development type, projected for the year 2020, assuming no change in GHG emissions per unit of activity as established for the baseline period, 2002-2004. To relate BAU to an emissions generating activity, the District proposes to establish emission factors per unit of activity, for each class and category, using the 2002-2004 baseline period as the reference."[39]

Category: "A District approved subdivision within a "class" as identified by unique operational or technical aspects."[40]

[34] San Joaquin Valley Air Pollution Control District, Policy APR 2005: Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency. Page 6.
[35] Ibid. 6 to 7
[36] Op. Cit. 7
[37] Op. Cit.
[38] Op. Cit.
[39] San Joaquin Valley Air Pollution Control District, FACT SHEET: Addressing Greenhouse Gas Emission Impacts under the California Environmental Quality Act (CEQA). Page 1.
[40] District Policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as Lead Agency.Page 7.

Class: "The broadest District approved division of stationary GHG sources based on fundamental type of equipment or industrial classification of the source operation."[41]

Global Warming: "Global warming is an increase in the temperature of the Earth's troposphere. Global warming has occurred in the past as a result of natural influences, but the term is most often used to refer to the warming predicted by computer models to occur as a result of increased emissions of greenhouse gases."[42]

Greenhouse Gas: "Greenhouse gas (GHG) emissions are the release of any gas that absorbs infrared radiation in the atmosphere. Generally when referenced in terms of global climate they are considered to be harmful. Greenhouse gases include, but are not limited to, water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrochlorofluorocarbons (HCFCs), ozone (O_3), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)."[43]

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[41] Op. Cit.
[42] General Plan 2030 Update Background Report. Page 6-3.
[43] Ibid. 6-3.

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Chapter 3.8

Hazards and Hazardous Materials

SUMMARY OF FINDINGS

The proposed Project will result in ***Less Than Significant Impacts*** related to Hazards and Hazardous Materials and therefore, no mitigation measures are required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hazards and Hazardous Materials. As required in Section 15126, all phases of the proposed Project will be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1] The environmental setting provides a description of the Hazards and Hazardous Materials in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County

[1] CEQA Guidelines, Section 15126.2 (a)

2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA THRESHOLDS OF SIGNIFICANCE

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance:

- Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?
- 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?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- Be located on a site which is included on a list of hazardous materials sites pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

ENVIRONMENTAL SETTING

"A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10)."[2]

"Similarly, hazardous wastes are defined as materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior

[2] Tulare County General Plan, *Background Report*. Page 8-26.

to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3)."[3]

The unincorporated Community of Traver is located approximately ten miles northwest of the City of Visalia in Tulare County. The community is generally bound on the north by Avenue 368, on the east by Road 44, on the south by Avenue 30, and on the west by State Route 99. Tulare County is surrounded by Fresno County to the north, Inyo County to the east, Kern County to the south, and Kings County to the west. Areas surrounding the proposed Project area are primarily utilized for agricultural purposes. Aside from some likely agricultural chemical use on agricultural properties in the vicinity, the current uses of the site and adjoining properties would not use, treatment, storage, disposal or generation of significant quantities of hazardous substances or petroleum products.

The nearest airstrip is the Visalia Municipal Airport, located in Visalia, approximately 15 miles north of the Community of Traver. The Visalia Landfill is approximately six miles southeast of the Community of Traver, while the Teapot Dome Landfill is located approximately 36 miles southeast of the Community of Traver. The Selma-Kingsburg-Fowler Sanitation District's wastewater treatment plant is the nearest WWTP which is located approximately 6.5 miles to the northwest of the Community of Traver.

A search of potential sources of hazardous material in the Project vicinity was performed by the Tulare County Resources Management Agency using the Geotracker database (the State Water Resources Control Board [SWRCB] underground contaminant information management system). Data about leaking underground storage tanks and other types of soil and groundwater contamination, along with associated cleanup activities, are part of the information that the SWRCB is required to maintain under Section 65962.5 of the California Public Resources Code (PRC) (i.e. the "Cortese List"). The Traver Elementary School Site was enrolled in a DTSC – Site Cleanup Program in 2001 and a Phase I was conducted in 2002 which found no further environmental concerns at the site.

Hazardous Waste Shipments Originating Within Tulare County

"In 2007, the DTSC Hazardous Waste Tracking System (HWTS) manifest data reports that approximately 5,925 tons of hazardous waste was transported from all categories of generators in Tulare County. As of November 2008, hazardous waste data available for 2008 indicated that approximately 7,160 tons of hazardous waste was generated in the county (DTSC, 2008a)."[4]

[3] Ibid.
[4] Op. Cit. 8-37. Background Report citation includes California Department of Toxic Substance Control Hazardous Waste Tracking System Database, Total Yearly Tonnage by Waste Code. Report generated November 17, 2008.

REGULATORY SETTING

Federal Agencies & Regulations

Hazardous Materials Transportation Act

"The Hazardous Materials Transportation Act of 1975 (HMTA), as amended, is the major transportation-related statute affecting [Department of Energy] DOE. The objective of the HMTA according to the policy stated by Congress is ". . .to improve the regulatory and enforcement authority of the Secretary of Transportation to protect the Nation adequately against risks to life and property which are inherent in the transportation of hazardous materials in commerce." The HMTA empowered the Secretary of Transportation to designate as hazardous material any "particular quantity or form" of a material that "may pose an unreasonable risk to health and safety or property."

Regulations apply to ". . .any person who transports, or causes to be transported or shipped, a hazardous material; or who manufactures, fabricates, marks, maintains, reconditions, repairs, or tests a package or container which is represented, marked, certified, or sold by such person for use in the transportation in commerce of certain hazardous materials.""[5]

Superfund

"[Comprehensive Environmental Response, Compensation and Liability Act] CERCLA, commonly referred to as Superfund, were enacted on December 11, 1980. The purpose of CERCLA was to provide authorities with the ability to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at such sites, and established a trust fund to provide for cleanup when no responsible party could be identified. Additionally, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also provides for the National Priorities List, a list of national priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action."[6]

Superfund Amendments and Reauthorization Act (SARA)

"[Superfund Amendments and Reauthorization Act] SARA amended CERCLA on October 17, 1986. This amendment increased the size of the Hazardous Response Trust Fund to $8.5 billion, expanded EPA's response authority, strengthened enforcement activities at Superfund sites; and

[5] United States Department of Transportation. Federal Motor Carrier Safety Administration. How to Comply with Federal Hazardous Materials Regulations. https://www.fmcsa.dot.gov/regulations/hazardous-materials/how-comply-federal-hazardous-materials-regulations. Accessed September 20, 2017.
[6] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 8-27.

broadened the application of the law to include federal facilities. In addition, new provisions were added to the law that dealt with emergency planning and community right to know. SARA also required EPA to revise the Hazard Ranking System to ensure that the system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review for listing on the National Priorities List (NPL)."[7]

State Agencies & Regulations

Hazardous Substance Account Act (1984), California Health and Safety Code Section 25300 ET SEQ (HSAA)

"This act, known as the California Superfund, has three purposes: 1) to respond to releases of hazardous substances; 2) to compensate for damages caused by such releases; and 3) to pay the states 10 percent share in CERCLA cleanups. Contaminated sites that fail to score above a certain threshold level in the EPA's ranking system may be placed on the California Superfund list of hazardous wastes requiring cleanup."[8]

Cal/EPA Department of Toxic Substance Control (DTSC)

"Cal/EPA has regulatory responsibility under Title 22 of the California Code of Regulations (CCR) for administration of the state and federal Superfund programs for the management and cleanup of hazardous materials. The DTSC is responsible for regulating hazardous waste facilities and overseeing the cleanup of hazardous waste sites in California. The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement and Unified Program activities. HWMP maintains the EPA authorization to implement the [Resource Conservation and Recovery Act] RCRA program in California, and develops regulations, policies, guidance and technical assistance/ training to assure the safe storage, treatment, transportation and disposal of hazardous wastes. The State Regulatory Programs Division of DTSC oversees the technical implementation of the States Unified Program, which is a consolidation of six environmental programs at the local level, and conducts triennial reviews of Unified Program agencies to ensure that their programs are consistent statewide and conform to standards."[9]

California Occupational Safety and Health Administration (Cal/OSHA)

"Cal/OSHA and the Federal OSHA are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. Pursuant to the Occupational Safety and Health Act of 1970, Federal OSHA has adopted numerous regulations pertaining to worker safety, contained in the Code of Federal Regulations Title 29 (29 CFR). These regulations set standards for safe workplaces and work practices, including standards relating to hazardous material handling. Cal/OSHA assumes primary responsibility for developing and enforcing state workplace safety regulations. Because California has a federally approved OSHA program, it is

[7] Ibid.
[8] Op. Cit. 8-28 to 8-29.
[9] Op. Cit. 8-29.

required to adopt regulations that are at least as stringent as those identified in 29 CFR. Cal/OSHA standards are generally more stringent than federal regulations."[10]

Hazardous Materials Transport Regulations

"California law requires that Hazardous Waste (as defined in California Health and Safety Code Division 20, Chapter 6.5) be transported by a California registered hazardous waste transporter that meets specific registration requirements. The requirements include possession of a valid Hazardous Waste Transporter Registration, proof of public liability insurance, which includes coverage for environmental restoration, and compliance with California Vehicle Code registration regulations required for vehicle and driver licensing."[11]

Cal/EPA Cortese List

"The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the legislator who authored the legislation that enacted it). The list, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA)."[12] The Cortese List identifies the following:

- Hazardous Waste and Substances Sites
- Cease and Desist Order sites
- Waste Constituents above Hazardous Waste Levels outside the Waste Management Unit Sites
- Leaking Underground Storage Tank (LUST) Cleanup Sites
- Other cleanup sites
- Land disposal sites
- Military sites
- Waste Discharge Requirements sites
- Permitted Underground Storage Tank (UST) Facilities Sites
- Monitoring Wells Sites
- DTSC Cleanup Sites
- DTSC Hazardous Waste Permit Sites

California Hazardous Material Release Response Plans and Inventory Law of 1985

The California Hazardous Material Release Response Plans and Inventory Law of 1985, often referred to as the Business Plan Act, requires facility operators to prepare Hazardous Materials Business Plans (HMBP). HMBPs are required to inventory hazardous materials stored and used within the site, disclose the location of storage and uses on site, maintain an emergency response plan, an contain provisions specifying employee training in safety and emergency response procedures. Local regulatory authorities such as Environmental Health Departments collect Hazard materials Business Plans.

[10] Op. Cit. 8-30 to 8-31.
[11] Op. Cit. 8-31.
[12] Cal/EPA, Background and History. http://calepa.ca.gov/SiteCleanup/CorteseList/Background/. Accessed September 20, 2017.

California Accidental Release Program (CalARP)

The CalARP requires certain facilities to prepare RMPs. The CalARP is similar to the CAA's Section 112(r). A facility handling hazardous materials listed in the CalARP and federal RMP regulations must comply with both statutes. The CalARB formally replaced California's old Risk Management Prevention Program (RMPP) as of January 1997. Certain facilities prior to implementation of the CalARP were required to comply with the RMPP regulation administered by the State Office of Emergency Services (OES). The majority of these facilities and future facilities are required to comply with both the federal RMP and CalARP regulations. These similar regulations require facility operators that handle an amount of a listed acutely hazardous material, as well as explosive or flammable material, exceeding a threshold quantity to conduct additional planning studies covering equipment and safety systems, operating procedures, preventative maintenance, off-site consequence and risk assessment analysis, and safety auditing. OES delegates its enforcement authority to local administrating agencies such as county Environmental Health Departments.

Emergency Response to Hazardous Material Incidents

California has developed an Emergency Response Plan to coordinate emergency services provided by Federal, State, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is administered by the state OES, which coordinates the responses of other agencies including CalEPA, the California Highway Patrol, CDFG, the Central RWQCB, and the Tulare County Office of Emergency Services.[13]

Local Policy & Regulations

Tulare County Office of Emergency Services

"The Tulare County Office of Emergency Services (OES) is Tulare County's comprehensive emergency management program. The discipline of emergency management aims to create partnerships, plans, and systems to build capabilities and coordinate the efforts of government, industry, and voluntary organizations in all phases of an emergency.

The activities of Tulare County OES can be categorized under the four phases of the emergency management cycle: Preparedness, Response, Recovery, and Mitigation. The day-to-day activities of the program center around Preparedness and Mitigation phases, in order to combat potential hazards and minimize community impacts during the Response and Recovery phases. The following descriptions offer more detail about the activities in each phase of emergency management.

[13] County of Tulare Office of Emergency Services, What is OES? http://tularecounty.ca.gov/oes/index.cfm/what-is-oes/ Accessed September 20, 2017.

Preparedness

- Public Education
- Training & Exercise for responders
- Grants for public safety & health agencies

Response

Tulare County OES maintains the Emergency Operations Center (EOC) for the County and Operational Area. Tulare County OES also administers the AlertTC notification system and WebEOC crisis information management system.

Recovery

After the emergency is over, there is still considerable work to be done to help the community return to a pre-disaster state. Recovery often takes several years, perhaps even decades, to fully complete.

Mitigation

Mitigation is the process by which hazards and vulnerabilities are identified, and measures taken to decrease the potential for occurrence of the hazard, the vulnerability to the hazard should it occur, or both. Tulare County Office of Emergency Services implements the 2011 Tulare County Hazard Mitigation Plan."[14]

Tulare County Environmental Health and Human Services Agency

"Since 1995, our organization, commonly referred to as HHSA, has been an integrated agency, providing a broad range of social and human services. Our programs include traditional categories of County service delivery, such as public health, public assistance, environmental health, child protective services, and mental health. Programs for veterans, those on conservatorship, and for the aging population also fall under our umbrella."[15]

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that apply to the Project are listed as follows:

HS-4.1 Hazardous Materials - The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.

[14] 2011 Tulare County Hazard Mitigation Plan, http://tularecounty.ca.gov/oes/index.cfm/linkservid/6C690A67-1893-493E-A5467D6CAC8BDDE5/showMeta/0/ Accessed September 20, 2017.
[15] Tulare County Environmental Health Webpage, http://tchhsa.org/hhsa/index.cfm/message-from-the-director/

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

IMPACT ANALYSIS

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Project Impact Analysis: ***Less Than Significant Impact***

Other than the school site noted in the EnviroStor Database search results, there are no known hazardous materials sites in the Project vicinity. Construction of the Project's components would require the transport and use of small quantities of hazardous materials in the form of gasoline, diesel and oil associated with construction equipment. There is the potential for small leaks due to refueling of the construction equipment; however, standard construction Best Management Practices (BMPs) included in the SWPPP would reduce the potential for and clean-up in the unlikely event of spills or leaks of construction-related fuels and other hazardous materials. The BMP included in the SWPPP addresses storm water contamination, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials. All solid construction wastes would be disposed of or recycled by qualified service providers. In order to accommodate directing of construction materials to proper end-point destinations, contractors and workers would be educated on waste sorting, appropriate recycling storage areas, and measures to reduce landfill waste. Any hazardous wastes, in liquid or solid form, would be removed from the site by a licensed hazardous waste recycling or disposal firm.

The Project operation may require the storage of minimal amounts of hazardous materials, such as fuel and lubricants related to lift station maintenance. The storage, transport, and use of these materials would comply with Local, State, and Federal regulatory requirements. Typical operations and maintenance activities would produce less than 220 lbs. of combined solid and liquid waste. The EPA considers businesses that produce less than 220 lbs. of hazardous waste a Conditionally Exempt Small Quantity Generator, which are exempt from hazardous waste management regulations[16]. Implementation of Tulare County General Plan policies would ensure that impacts from the handling, storage, transport, or accidental release of hazardous materials are less than significant. The Project would not result in a significant hazard to the public or the environment; therefore, Project-specific impacts would be ***Less Than Significant.***

[16] Environmental Protection Agency, Managing Your Hazardous Waste, A guide for Small Businesses. http://www.epa.gov/osw/hazard/generation/sqg/handbook/k01005.pdf. Accessed September 20, 2017.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

While construction of the proposed pipeline and associated improvements would require equipment that utilizes insignificant amounts hazardous materials, the long term operation of the pipeline would not require any. Therefore, there would be ***No Cumulative Impacts***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

Potential Project-specific impacts related to this Checklist Item would be ***Less Than Significant***. ***No Cumulative Impacts*** related to this Checklist Item would occur.

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?

Project Impact Analysis: ***Less Than Significant Impact***

Construction and operation of the Project would require equipment that utilizes insignificant amounts of hazardous materials. Therefore, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, while construction of the proposed pipeline and associated improvements would require equipment that utilizes insignificant amounts of hazardous materials, the long-term operation of the pipeline would not require any such materials. Therefore, cumulative impacts would be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant***

As discussed earlier, Project-specific impacts related to this Checklist item would be Less Than Significant. ***No Cumulative Impacts*** related to this Checklist Item would occur.

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

Project Impact Analysis: ***Less Than Significant Impact***

The Traver Elementary School is approximately 0.4 miles to the northwest of the existing WWTP however, the proposed pipeline will be installed immediately south of the School site, within the right-of-way on Merritt Drive (and other on-site improvements would occur within the WWTP footprint). As described in Item VIII (a) above, the proposed pipeline and associated WWTP improvements will be in compliance with all applicable hazardous and safety standards. Additionally, the school site is currently, and will continue to be, enclosed with fencing which will ensure the safety of the students during installation of the pipeline. Therefore, ***Less Than Significant Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Traver Community WWTP is not located within one-quarter (¼) mile of an existing or proposed school; however, a new pipeline will be installed immediately south of the Traver Joint Elementary School within the existing Merritt Drive right-of-way. Impacts to this Checklist Item will be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

As noted earlier, one site was identified on the EnviroStor Hazardous Waste Site Database; the Traver Elementary School site. As determined by the Phase I conducted in 2002, the school site would not create a significant hazard to the public or the environment.[17] Therefore, ***No Project-specific Impact*** would occur.

[17] California Department of Toxic Substances Control. Envirostor. Traver elementary School Site. http://www.envirostor.dtsc.ca.gov/public/deliverable_documents/1241076409/Phase%201%20Traver.pdf. Accessed September 20, 2017.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project does not involve any lands that are listed as hazardous materials sites pursuant to Government Code Section 65962.5 and are not included on a list compiled by the Department of Toxic Substances Control. Therefore, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Project Impact Analysis: ***No Impact***

The nearest airstrip is Visalia Municipal Airport, located approximately 10 miles southeast of the Community of Traver.

The Project is not located within a Tulare County Airport Land Use Plan boundary, Federal Aviation Administration designated civilian airport Runway Clear Zone, military airfield Clear Zone, or an Accidental Potential Zone. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Project is not located within a Tulare County Airport Land Use Plan boundary. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted above, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Project Impact Analysis: ***No Impact***

The Project is not in the vicinity of a private airstrip. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.
The Project is not in the vicinity of a private airstrip. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

"In the event of a disaster, certain facilities are critical to serve as evacuation centers, provide vital services, and provide for emergency response. Existing critical facilities in Tulare County include hospitals, county dispatch facilities, electrical, gas, and telecommunication facilities, water storage and treatment systems, wastewater treatment systems, schools, and other government facilities. This plan also addresses evacuation routes, which include all freeways, highways, and arterials that are located outside of the 100-year flood plain."[18]

The plan referenced above is identified in the Tulare County General Plan as the Multi-Hazard Functional Plan. The plan was superseded with the Tulare County Hazard Mitigation Plan (HMP) (2011) and Tulare County/Operation Area Emergency Operation Plan (EOP) (2013).[19] "[H]azard mitigation is any work to minimize the impacts of any type of hazard

[18] Tulare County General Plan 2030 Update, Background Report, February 2010. Pages 8-44 to 8-45.
[19] These two documents are available upon request from the Tulare County Resource Management Agency-Environmental Planning Division.

event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process in which hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions to reduce or eliminate hazard risk are developed. The implementation of the mitigation actions, which include both short- and long-term strategies that may involve planning, policy changes, programs, projects, and other activities, is the end result of this process."[20] The EOP "establishes policies, procedures and an emergency management organization (EMO), and assigns roles and responsibilities to ensure the effective management of emergency operations within the Tulare Operational Area (OA). The EOP addresses the County/Operational Area's planned response to disasters and supports the California Emergency Plan. The plan also identifies sources of external support which might be provided through mutual aid and specific statutory authorities by other jurisdictions, State and Federal agencies, and the private sector."[21]

In addition to the Tulare County General Plan, the Tulare County Association of Governments (TCAG) Draft Environmental-Impact-Report for the 2014-2040 Regional Transportation Plan & Sustainable-Communities Strategy (RTP/SCS) indicated that the RTP/SCS could facilitate the transport of hazardous materials on roadways or railways in Tulare County. "Transportation improvement projects under the 2014 RTP/SCS could facilitate the transport of hazardous materials on roadways or railways in Tulare County but would not directly result in a transport-related hazard. Compliance with existing laws and regulations, such as the federal Resource Conservation and Recovery Act (RCRA) and the state Hazardous Waste Control Act and California Vehicle Code, would ensure that the transport of hazardous materials, the handling of acute hazardous substances within proximity to schools, and the release of hazardous materials would be adequately controlled such that impacts would be less than significant. With respect to hazardous materials sites listed under Government Code Section 65962.5, the majority of transportation improvements involve modification of existing facilities, rather than construction of new facilities, and would not occur on known hazardous sites. With regard to future projects that would develop new facilities, because of the programmatic nature of the project, it is not possible to determine with accuracy whether future projects located on previously undisturbed land would contain hazardous materials. However, such projects would be required to address any on-site environmental issues, including any potential hazardous materials and mitigate such impacts accordingly. Impacts would be less than significant.

Some projects under the 2014 RTP/SCS may be located within an airport safety zone; however, the 2014 RTP/SCS would not directly expose people or create a new airport safety hazard. The 2014 RTP/SCS would not expose people to new wildland fire hazards, as future infill and TOD projects would occur in existing urbanized areas, not adjacent to wildlands. Finally, the 2014 RTP/SCS would have no adverse impact on adopted emergency response plans or emergency evacuation plan; rather, by improving circulation in the County, it could

[20] Tulare County Hazard Mitigation Plan. Page 1-1.
[21] Tulare County/Operation Area Emergency Operation Plan. Page 1.

have beneficial impact on emergency response and evacuation. Impacts would be less than significant."[22]

WWTP improvements will take place within the existing WWTP site; however, pipeline will be installed within rural and semi-rural paved roads and existing road rights-of-way. The pipelines would be trenched in the existing rights-of-way that generally consist of gravel road shoulders (which is typical of roadways in the area). Occasionally, pipelines would require trenching beneath paved roadways to connect to other pipeline infrastructure, as is the case with the inter-tie with existing Traver Community wastewater treatment plant pipeline on Burke Drive. The construction and operation of an underground pipeline would not require long-term roadway closures nor would it impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The construction and operation of an underground pipeline would not impair implementation of or physically interfere with an adopted emergency response plans or emergency evacuation plans. Therefore, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Project Impact Analysis: ***No Impact***

WWTP improvements would take place within the existing WWTP site and a new pipeline would be installed within existing rural and semi-rural paved roads and existing road rights-of-way. The pipelines would be trenched in the existing rights-of-way that generally consist of gravel road shoulders, which is typical of roadways in the area. Occasionally, pipelines would require trenching through paved roadways to connect to other pipeline infrastructure,

[22] Draft 2014-2040 Regional Transportation Plan & Sustainable Communities Strategy Draft Environmental Impact Report-(SCH#2012081070) Pages 4.13-1 and 4.13-2; which can be accessed at: http://www.tularecog.org/wp-content/uploads/2015/06/Regional-Transportation-Plan-RTP-Sustainable-Communities-Strategy-SCS-Environmental-Impact-Report-Draft-ADEIR-with-Appendices.pdf

as is the case with the inter-tie with existing Traver Community wastewater treatment plant pipeline at Burke Drive. The Project site does not consist of any wildlands. Therefore, the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. There would be ***No Project-specific Impact.***

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Project is not located in wildland and would not impact the growth of wildlands. ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted above, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

DEFINITIONS

Hazardous Material - "A hazardous material is defined by the California Code of Regulations (CCR) as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating, illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10)."[23]

Hazardous Wastes - "Similarly, hazardous wastes are defined as materials that no longer have practical use, such as substances that have been discarded, discharged, spilled, contaminated, or are being stored prior to proper disposal. According to Title 22 of the CCR, hazardous materials and hazardous wastes are classified according to four properties: toxic, ignitable, corrosive, and reactive (CCR, Title 22, Chapter 11, Article 3)."[24]

Hazardous Waste Generators - "Hazardous waste generators can be classified in three groups depending on the quantity of waste generated in any month. A Conditionally Exempt Small Quantity Generator (CESQG) is defined in regulation as a generator of less than 100 kilograms of hazardous waste in a calendar month. A Small Quantity Generator (SQG) is a generator of greater than 100 kg and less than 1000 kg of hazardous waste in a calendar month. A Large Quantity Generator (LQG) generates greater than 1000 kg of hazardous waste in a calendar month. Determination of whether a facility is a CESQG, SQG, or LQG is the responsibility of the generator. The designation may change during the year, based on the quantity of hazardous waste produced during a particular month. Specific hazardous waste materials may also be exempt from the monthly total quantity. Therefore, the Certified Unified Program Agencies (CUPA) cannot authoritatively designate the number of generators within each of the above categories."[25]

Small Quantity Generators - "CUPA has designated 58 active and 30 inactive small quantity generators (SQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive SQG's during calendar year 2002 were 121.7 and 56.3 tons, respectively."[26]

Large Hazardous Waste Producers - "CUPA has designated 23 active and 3 inactive large quantity generators (LQG's). The total estimated quantities of hazardous waste generated within Tulare County by active and inactive LQG's during calendar year 2002 were 559.7 and 121.6 tons, respectively."[27] Treatment Facilities: "There are nine tiered permit facilities conducting onsite hazardous waste treatment in a total of eleven treatment processes in Tulare County. An estimated total of 10,549 tons of hazardous waste per year is treated by these facilities. The three highest-volume hazardous waste types treated are:

[23] Tulare County General Plan, *Background Report*, 8-26.
[24] Ibid. 8-26.
[25] Op. Cit. 8-28 to 8-29.
[26] Op. Cit. 8-29.
[27] Op. Cit.

1. Unspecified Aqueous Solution– 6,028 tons;
2. Aqueous Solution with Metals – 3,570 tons; and
3. Liquids with Chromium6+ greater than 500 mg/L – 741 tons."[28]

Storage Facilities - "According to available information from the agencies (Department of Toxic Substances Control [DTSC] and Regional Water Quality Control Board [RWQCB]) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the storage of hazardous waste in Tulare County."[29]

Disposal Facilities - "According to available information from the agencies (DTSC and RWQCB) that oversee treatment, storage and disposal facilities (TSDFs), there are no facilities authorized for the disposal of hazardous waste in Tulare County."[30]

REFERENCES

Tulare County Environmental Health Webpage, http://tchhsa.org/hhsa/index.cfm/message-from-the-director/

Tulare County 2030 General Plan, *Background Report*

The Office of Health, Safety and Security, *Hazardous Materials Transportation Act*, which can be accessed at: http://www.hss.doe.gov/sesa/environment/policy/hmta.html. Updated August 10, 2012.

2011 Tulare County Hazard Mitigation Plan. December 2011. Prepared by consultants URS. Accessed September 20, 2017 at: http.//tularecounty.ca.gov/oes/index.cfm/linkservid/6C690A67-1893-493E-A5467D6CAC8BDDE5/showMeta/0/.

Tulare County/Operation Area Emergency Operations Plan. Tulare County Office of Emergency Services. December 2013.

Cal/EPA, *Background and History on "Cortese List" Statute*, which can be accessed at: http://www.calepa.ca.gov/sitecleanup/corteselist/Background.htm, Updated August 20, 2007.

Environmental Protection Agency, Managing Your Hazardous Waste, A guide for Small Businesses, which can be accessed at: http://www.epa.gov/osw/hazard/generation/sqg/handbook/k01005.pdf. Accessed September 20, 2017.

[28] Op. Cit. 8-30.
[29] Op. Cit.
[30] Op. Cit.

California Department of Toxic Substance Control, which can be accessed at: http://www.envirostor.dtsc.ca.gov/public/EnviroStor%20Glossary.pdf

California Department of Toxic and Substance Control, which was accessed September 20, 2017 at: https://www.envirostor.dtsc.ca.gov/public/mapfull.asp?global_id=&x=-119&y=37&zl=18&ms=640,480&mt=m&findaddress=True&city=traver%20ca&zip=&county=&federal_superfund=true&state_response=true&voluntary_cleanup=true&school_cleanup=true&ca_site=true&tiered_permit=true&evaluation=true&military_evaluation=true&school_investigation=true&operating=true&post_closure=true&non_operating=true

California Department of Toxic Substances Control. Envirostor. Traver elementary School Site. http://www.envirostor.dtsc.ca.gov/public/deliverable_documents/1241076409/Phase%201%20Traver.pdf. Accessed September 20, 2017.

Tulare County Association of Governments (TCAG), Draft 2014-2040 Regional Transportation Plan & Sustainable Communities-Strategy Draft Environmental Impact Report (SCH#2012081070) accessed on December 30, 2014 at: http://www.tularecog.org/wp-content/uploads/2015/06/Regional-Transportation-Plan-RTP-Sustainable-Communities-Strategy-SCS-Environmental-Impact-Report-Draft-ADEIR-with-Appendices.pdf. Accessed September 20, 2017.

United States Department of Transportation. Federal Motor Carrier Safety Administration. How to Comply with Federal Hazardous Materials Regulations. https://www.fmcsa.dot.gov/regulations/hazardous-materials/how-comply-federal-hazardous-materials-regulations. Accessed September 20, 2017.

Chapter 3.9

Hydrology and Water Quality

SUMMARY OF FINDINGS

The proposed Project would result in ***Less Than Significant Impacts*** related to Hydrology and Water Quality. A review of potential impacts is provided in the analysis below and is based partially on information provided in the "*Traver Community Wastewater System Improvements Technical Memorandum*" and its attachment "*Attachment 1 – Plan of Study"* (together referred to as "Report" or "Wastewater System Report") and included as Appendix "D" of this DEIR.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Hydrology and Water Quality. As required in CEQA Guidelines Section 15126, all phases of the proposed Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2 a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

[1] CEQA Guidelines, Section 15126.2(a).

The environmental setting provides a description of the Hydrology and Water Quality in Tulare County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA THRESHOLDS OF SIGNIFICANCE

The thresholds of significance for this section are established by the CEQA checklist item questions. The following are potential thresholds for significance.

- Project is not in compliance with the regulations outlined by the State Water Resources Control Board.
- Project is not in compliance with the regulations by the Regional Water Quality Control Board.
- Design of stormwater facilities will not adequately protect surface water quality.
- Project will cause erosion.
- Project will alter existing drainage patterns or watercourse.
- Project will increase flooding or flooding impacts.
- Project's water usage not assessed in the Tulare County 2030 General Plan (General Plan Amendment, Zone Change, etc.).
- Project that will impact service levels of a Water Service District.
- Project includes or requires an expansion of a Water Service District.
- Project is in a flood zone.
- Project will create a flood safety hazard.
- Project located immediately downstream of a dam.
- Project will violate any water quality standards or waste discharge requirements.
- Project will substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted*)*.
- Project will substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Project will substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- Project will 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.
- Project will otherwise substantially degrade water quality; place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Project will place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- Project will expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or be subject to inundation by seiche, tsunami, or mudflow.

ENVIRONMENTAL SETTING

"The Tulare Lake Hydrologic Region covers approximately 10.9 million acres (17,050 square miles) and includes all of Kings and Tulare counties and most of Fresno and Kern counties. The southern portion of the San Joaquin Valley is subdivided into two separate basins, the San Joaquin and the Tulare, by a rise in the valley floor resulting from an accumulation of alluvium between the San Joaquin River and the Kings River fan. The valley floor in this region had been a complex series of interconnecting natural sloughs, canals, and marshes."[2]

> *"The Basin is one of the most important agricultural centers of the world. Industries related to agriculture, such as food processing and packaging (including canning, drying, and wine making), are prominent throughout the area. Producing and refining petroleum lead non-agricultural industries in economic importance."*[3]

The Tulare Lake Hydrologic Region has both watershed areas (surface water) and groundwater sub-basin areas.

Watershed (Surface Water)

"The Tulare Lake region is divided into several main hydrologic subareas: the alluvial fans from the Sierra foothills and the basin subarea (in the vicinity of the Kings, Kaweah, and Tule rivers and their distributaries); the Tulare Lake bed; and the southwestern uplands. The alluvial fan/basin subarea is characterized by southwest to south flowing rivers, creeks, and irrigation canal systems that convey surface water originating from the Sierra Nevada. The dominant hydrologic features in the alluvial fan/basin subarea are the Kings, Kaweah, Tule, and Kern rivers and their major distributaries from the western flanks of the Sierra."[4]

[2] California Water Plan Update 2013, Tulare Lake Hydrologic Region Vol. 2 Regional Reports. Page TL-11. Accessed May 30, 2017 at: http://www.water.ca.gov/waterplan/docs/cwpu2013/Final/Vol2_TulareLakeRR.pdf
[3] Water Quality Control Plan for the Tulare Lake Basin Second Edition Revised January 2015 (with Approved Amendments). Page I-
[4] California Water Plan Update 2013, Tulare Lake Hydrologic Region Vol. 2 Regional Reports. Page TL-12 thru -13.

The White River drainage is just south of the Tule River drainage. The Tule sub-basin includes the White River drainage, which is similar to the region described in the California Water Plan Update in the preceding paragraph, with west and southwest-flowing streams, creeks, drainages and irrigation facilities conveying surface water to the Valley floor.

"Surface water from the Tulare Lake Basin only drains north into the San Joaquin River in years of extreme rainfall. This essentially closed basin is situated in the topographic horseshoe formed by the Diablo and Temblor Ranges on the west, by the San Emigdio and Tehachapi Mountains on the south, and by the Sierra Nevada Mountains on the east and southeast."[5]

Surface Water Quality

"Surface water quality in the Basin is generally good, with excellent quality exhibited by most eastside streams. The Regional Water Board intends to maintain this quality."[6] Specific objectives outlined in the Water Quality Control Plan are listed below: [7]

- **Ammonia:** Waters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/l (as N) in receiving waters.
- **Bacteria:** In waters designated REC-1, the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200 MPN /100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400 MPN /100 ml.
- **Biostimulatory Substances:** Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- **Chemical Constituents:** Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Color:** Waters shall be free of discoloration that causes nuisance or adversely affects beneficial uses.
- **Dissolved Oxygen:** Waste discharges shall not cause the monthly median dissolved oxygen concentrations (DO) in the main water mass (at centroid of flow) of streams and above the thermocline in lakes to fall below 85 percent of saturation concentration, and the 95 percentile concentration to fall below 75 percent of saturation concentration.
- **Floating Material:** Waters shall not contain floating material, including but not limited to solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
- **Oil and Grease:** Waters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

[5] Water Quality Control Plan for the Tulare Lake Basin Second Edition (Revised January 2015 (with Approved Amendments). Page I-1. Accessed May 30, 2017 at :http://www.waterboards.ca.gov/rwqcb5/water_issues/basin_plans/tlbp.pdf
[6] Ibid. III-2.
[7] Ibid. III-2 to III-7.

- **pH:** The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH.
- **Pesticides:** Waters shall not contain pesticides in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor which result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life
- **Salinity:** Waters shall be maintained as close to natural concentrations of dissolved matter as is reasonable considering careful use of the water resources.
- **Sediment:** The suspended sediment load and suspended sediment discharge rate of waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- **Settleable Material:** Waters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- **Tastes and Odors:** Waters shall not contain taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.
- **Temperature:** Natural temperatures of waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.
- **Toxicity:** All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life…
- **Turbidity:** Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.

Surface Water Supply

"Surface water supplies for the Tulare Lake Basin include developed supplies from the Central Valley Project (CVP), the State Water Project (SWP), rivers, and local projects. Surface water also includes the supplies for required environmental flows. Required environmental flows are comprised of undeveloped supplies designated for wild and scenic rivers, supplies used for instream flow requirements, and supplies used for Bay-Delta water quality and outflow requirements. Finally, surface water includes supplies available for reapplication downstream. Urban wastewater discharges and agricultural return flows, if beneficially used downstream, are examples of reapplied surface water."[8]

"Along the eastern edge of the valley, the Friant-Kern Canal is used to divert San Joaquin River water from Millerton Lake for delivery to agencies extending into Kern County. All of the Tulare Lake region's streams are diverted for irrigation or other purposes, except in the wettest years. Historically, they drained into Tulare Lake, Kern Lake, or adjacent Buena Vista Lake. The latter ultimately drained to Tulare Lake, which is about 30 feet lower in elevation."[9]

[8] General Plan Background Report. Page 10-7.
[9] California Water Plan Update 2009, Tulare Lake. Page TL-5.

"The Kings, Kaweah, Tule, and Kern Rivers, which drain the west face of the Sierra Nevada Mountains, are of excellent quality and provide the bulk of the surface water supply native to the Basin. Imported surface supplies, which are also of good quality, enter the Basin through the San Luis Canal/California Aqueduct System, Friant-Kern Canal, and the Delta-Mendota Canal. Adequate control to protect the quality of these resources is essential, as imported surface water supplies contribute nearly half the increase of salts occurring within the Basin."[10]

Ground Water Sub Basin

"The Tulare Lake Hydrologic Region contains 12 groundwater basins and 7 subbasins recognized in California Department of Water Resources (DWR) *Bulletin 18-2003* (California Department of Water Resources 2003) and underlie approximately 8,400 square miles, or about 50 percent of the region. The majority of the groundwater in the region is stored in alluvial aquifers Figure TL-3 [in the Water Quality Control Plan] shows the location of the alluvial groundwater basins and subbasins and Table TL-1 [in the Water Quality Control Plan] lists the associated names and numbers. Pumping from the alluvial aquifers in the region accounts for about 38 percent of California's total average annual groundwater extraction. The most heavily used groundwater basins in the region include Kings, Westside, Kaweah, Tulare Lake, Tule, and Kern County. These basins account for approximately 98 percent of the average 6.3 million acre-feet (maf) of groundwater pumped annually during the 2005-2010 period. Groundwater wells in the San Joaquin Valley extend to depths of more than 1,000 feet (Page 1986). Based on a series of irrigation pump tests, groundwater pumping rates in the various subbasins were determined to range from about 650 gallons per minute (gpm) to about 1,650 gpm (Burt 2011)."[11]

The Community of Traver and the Project area is within the Kings sub-basin of the San Joaquin Valley Groundwater Basin within the Tulare Lake Hydrologic Region. The nearest natural body of water is the Kings River, located approximately 2 ½ miles north of the Community.

"Water agencies in the Tulare Lake region have been practicing conjunctive use for many years to manage groundwater and assist dry year supplies. Groundwater recharge is primarily from rivers and natural streambeds, irrigation water percolating below the root zone of irrigated fields, direct recharge from developed ponding basins and water banks, and in-lieu recharge where surface water is made available in-lieu of groundwater pumping. Some water agencies accomplish recharge by directing available water into existing natural streambeds and sloughs, and others encourage application of water, when available, on farmed fields. The Deer Creek and Tule River Authority provides an example of how groundwater management activities can be coordinated with other resources. The authority, in conjunction with the US Bureau of Reclamation, has constructed more than 200 acres of recharge basins as part of its Deer Creek Recharge-Wildlife Enhancement Project. When available, the project takes surplus water during winter months and delivers it to the basins, which serve as winter habitat for migrating waterfowl, creating a

[10] Water Quality Control Plan for the Tulare Lake Basin Second Edition Revised January 2015 (with Approved Amendments). Page I-1.01.
[11] California Water Plan Update 2013, Tulare Lake. Page TL-13 to TL-16.

significant environmental benefit. Most of the water also recharges into the underlying aquifer, thereby benefiting the local groundwater system."[12]

Groundwater Quality

Specific objectives outlined in the Water Quality Control Plan are listed below:

- **Bacteria:** In ground waters designated MUN, the concentration of total coliform organisms over any 7-day period shall be less than 2.2 MPN/100 ml.
- **Chemical Constituents:** Ground waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.
- **Pesticides:** No individual pesticide or combination of pesticides shall be present in concentrations that adversely affect beneficial uses.
- **Radioactivity:** Radionuclides shall not be present in ground waters in concentrations that are deleterious to human, plant, animal, or aquatic life, or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.[13]

According to the California Water Plan 2009, "Water quality issues relate to the relative impacts to the beneficial uses of water, including its drinking quality, use in irrigated agriculture, etc. Below are key water quality issues in this region. For further discussion, see Appendix B Water Quality [of the 2009 Water Plan]."[14]

> **"Salinity:** Salinity is the primary contaminant affecting water quality and habitat in the Tulare Lake region. Because the groundwater basin in the San Joaquin Valley portion of the region is an internally drained and closed basin, salts, much of which are introduced into the basin with imported water supplies, build up in the soil and groundwater. Salt contained in the imported water supply is the primary source of salt circulating in the Tulare Lake region. The California Aqueduct, Friant-Kern Canal, and to a less extent Delta Mendota Canal supply most of the higher quality surface irrigation water in the Tulare Lake region. The quality of this supply may be impaired by the recirculation of salts from the San Joaquin River to the Delta Mendota Canal intake pump, leading to a greater net accumulation of salts in the basin. Delivery data from the two major water projects in California indicate there is a substantial amount of salt being transported from the Delta to other basins throughout the state. Annual import of salt into the Tulare Lake region is estimated to be 1,206 thousand tons of salt. In situ dissolution of salts and pumping from the underlying confined aquifer are important secondary sources.
>
> **Sedimentation and Erosion:** In the Central Valley, erosion is occurring from the headwaters down to the valley floor. Although naturally occurring, erosion can be accelerated by timber harvest activities, land use conversion, rural development, and grazing. Excessive soil erosion and sediment delivery can impact the beneficial uses of

[12] Ibid. TL-10.
[13] Water Quality Control Plan for the Tulare Lake Basin Second Edition Revised January 2015 (with Approved Amendments). Pages III-7, III-7.01, and III-8.
[14] California Water Plan Update 2009, Tulare Lake. Pages TL-24.

water by (1) silting over fish spawning habitats; (2) clogging drinking water intakes; (3) filling in pools creating shallower, wider, and warmer streams and increasing downstream flooding; (4) creating unstable stream channels; and (5) losing riparian habitat. Timber harvesting in the riparian zone can adversely affect stream temperatures by removing stream shading, a concern for spawning and rearing habitat for salmonids. Thousands of miles of streams are potentially impacted, and the lack of resources has prevented a systematic evaluation of these impacts.

Nitrates and Groundwater Contaminates: Groundwater is a primary water supply, but in many places it is impaired or threatened because of elevated levels of nitrates and salts that are derived principally from irrigated agriculture, dairies, discharges of wastewater to land, and from disposal of sewage from both community wastewater systems and septic tanks. As population has grown, many cities have struggled to fund improvements in wastewater systems. High TDS content of west-side water is due to recharge of stream flow originating from marine sediments in the Coast Range.

Naturally-occurring arsenic and human-made organic chemicals—pesticides and industrial chemicals—in some instances have contaminated groundwater that is used as domestic water supplies in this region. In some cases, nitrates are from natural sources. Agricultural pesticides and herbicides have been detected throughout the valley, but primarily along the east side where soil permeability is higher and depth to groundwater is shallower. The most notable agricultural contaminant is DBCP, a now-banned soil fumigant and known carcinogen once used extensively on grapes."[15]

Groundwater Supply

"Surface water supplies tributary to or imported for use within the Basin are inadequate to support the present level of agricultural and other development. Therefore, ground water resources within the valley are being mined to provide additional water to supply demands."[16]

"Tulare Lake region's groundwater use rises and falls contingent on the availability of both local and imported surface supplies. The management of water resources within this region is a complex activity and critical to the region's agricultural operations. Local annual surface supplies are determined by the amount of runoff from the Sierra Nevada watersheds, the flows captured in local reservoirs, and carryover storage over a series of years. Imported surface supply availability is contingent not only on runoff in any year or series of years but also by regulations determining the amount of water that can be pumped month to month from the Sacramento-San Joaquin River Delta due to fishery and other concerns. The recent San Joaquin River settlement will reduce the overall volume of water available for diversion into the Friant-Kern Canal. The new biological opinion on the Operating Criteria and Plan (OCAP) for the SWP and CVP will impact surface water supplies to south-of-Delta water users."[17]

[15] California Water Plan Update 2009, Tulare Lake. Page TL-22 to TL-25.
[16] Water Quality Control Plan for the Tulare Lake Basin Second Edition Revised January 2015 (with Approved Amendments). Page I-1.01.
[17] California Water Plan Update 2009, Tulare Lake. Page TL-15 to TL-17.

"Groundwater in Tulare County occurs in an unconfined state throughout, and in a confined state beneath its western portion. Extensive alluvial fans associated with the Kings, Kaweah, and Tule Rivers provide highly permeable areas in which groundwater in the unconfined aquifer system is readily replenished. Interfan areas between the streams contain less permeable surface soils and subsurface deposits, impeding groundwater recharge and causing well yields to be relatively low. The mineral quality of groundwater in Tulare County is generally satisfactory for all uses."[18]

"Groundwater recharge is primarily from natural streams, other water added to streambeds, from deep percolation of applied irrigation water, and from impoundment of surface water in developed water bank/percolation ponds."[19]

"The Tulare Lake region has experienced water-short conditions for more than 100 years, which has resulted in a water industry that has consciously developed—through careful planning, management and facility design—the possibility of a shortage occurring in any year. Water demand is more or less controlled by available, reliable long-term water supplies. Over the years, agricultural acreage has risen and dropped largely based on water supplies. The region initially developed with surface water supplies; but local water users learned these supplies could widely vary in volume from year to year and drought conditions could quickly develop. The introduction of deep well turbines resulted in a dramatic rise in groundwater use in the early 1900s, subsequently resulting in dropping groundwater levels and land subsidence. Surface water storage and conveyance systems built to alleviate the overuse of groundwater provided an impounded supply of water that could be used during years with deficient surface water. This resulted in a regional reliance on conjunctive water use in the development of the local water economy. Efforts to address Delta environmental issues and the subsequent loss of surface water to the region is increasing groundwater use and creating concern that additional pumping will increase subsidence."[20]

According to the 2009 California Water Plan, the water storage has varied between 1998-2005, likely due to changing precipitation levels, as seen in Table 3.9-1 and Figure 3.9-1.

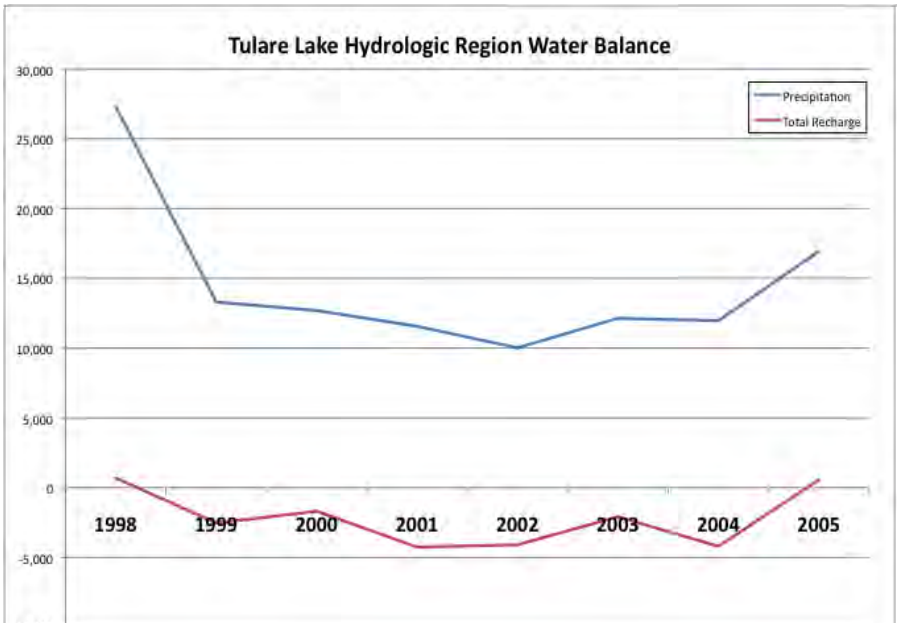
[18] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 10-11.
[19] Department of Water Resources California Water Plan Update 2009, Tulare Lake, page TL-17.
[20] Ibid. 19.

Table 3.9-1[21]
Tulare Lake Hydrologic Water Balance for 1998-2005 (thousand acre-feet)

Tulare Lake Region	Water Year							
	1998	1999	2000	2001	2002	2003	2004	2005
Water Entering the Region								
Precipitation	27,306	13,298	12,693	11,564	10,021	12,137	11,964	16,939
Inflow from Oregon/Mexico	0	0	0	0	0	0	0	0
Inflow from Colorado River	0	0	0	0	0	0	0	0
Imports from Other Regions	3,716	4,817	5,627	3,696	4,239	5,174	4,816	5,909
Total	**31,022**	**18,115**	**18,320**	**15,260**	**14,260**	**17,311**	**16,780**	**22,848**
Water Leaving the Region								
Consumptive Use of Applied Water	5,401	7,486	7,427	7,591	7,938	7,430	8,031	6,655
Outflow to Oregon/Nevada/Mexico	0	0	0	0	0	0	0	0
Exports to Other Regions	1,857	821	1,540	1,093	1,643	1,898	1,961	1,724
Statutory Required Outflow to Salt Sink	0	0	0	0	0	0	0	0
Additional Outflow to Salt Sink	457	456	457	458	305	458	457	300
Evaporation, Evapotranspiration of Native Vegetation, Groundwater Subsurface Outflows, Natural and Incidental Runoff, Ag Effective Precipitation & Other Outflows	22,606	11,885	10,578	10,374	8,462	10,327	10,532	13,596
Total	**30,321**	**20,648**	**20,002**	**19,516**	**18,348**	**20,113**	**20,981**	**22,274**
Storage Changes in Region: [+] Water added to storage, [-] Water removed from storage								
Change in Surface Reservoir Storage	438	-595	-57	-141	-161	173	-199	680
Change in Groundwater Storage	263	-1,938	-1,625	-4,115	-3,927	-2,975	-4,002	-106
Total	**701**	**-2,533**	**-1,682**	**-4,256**	**-4,088**	**-2,802**	**-4,201**	**574**

(This table does not include dairy usage)

Figure 3.9-1[22]



"Groundwater overdraft is expected to decline statewide by 2020. The reduction in irrigated acreage in drainage problem areas on the west side of the San Joaquin Valley is expected to reduce

[21] Ibid. 24.
[22] Department of Water Resources, 2009. California Water Plan Update, Tulare Lake.

groundwater demands in the Tulare Lake region by 2020."[23] According to the 2009 California Water Plan Update, it is anticipated that there will be a 550,000 acre-feet reduction in the water demand in the Tulare Lake Hydrologic Area under Current Growth trends. Slow & Strategic Growth may further decrease water demand, while Expansive Growth may increase water demand.

Table 3.9-2
Irrigation Districts in Tulare County[24]

Entity	Surface Water	Imported Water Source	Groundwater Extraction
Alpaugh Irrigation District	NA	Friant-Kern Canal (1,000af avg.)	19,000 af
Alta Irrigation District	King River	Friant-Kern Canal (surplus)	230,000 af
Delano-Earlimart Irrigation District	NA	Friant-Kern Canal (146,050 af avg.)	8,000 af
Exeter Irrigation District	NA	Friant-Kern Canal (1,000 af avg.)	14,000 af
Hills Valley Irrigation District	NA	Cross Valley Canal (2,000 af avg.)	1,000 af
Ivanhoe Irrigation District	Kaweah River	Friant-Kern Canal (11,650 af avg.)	15,000 af
Kaweah Delta Water Cons. District	Kaweah River	Friant-Kern Canal (24,000 af avg.)	130,000 af
Kern-Tulare Water District	Kern River	Cross Valley Canal (41,000 af avg.)	33,000 af
Lindmore Irrigation District	NA	Friant-Kern Canal (44,000 af avg.)	28,000 af
Lower Tulare River Irrigation Dist.	Tule River	Friant-Kern Canal (180,200 af avg.) Cross Valley Canal (31,000 af avg.)	NA
Lindsay-Strathmore Irrigation Dist.	NA	Friant-Kern Canal (24,150 af avg.)	NA
Orange Cove Irrigation District	NA	Friant-Kern Canal (39,200 af avg.)	30,000 af
Pioneer Water Irrigation District	Tule River		3,000 af
Pixley Irrigation District	NA	Friant-Kern Canal (1,700 af avg.) Cross Valley Canal (31,000 af avg.)	130,000 af
Porterville Irrigation District	Tule River	Friant-Kern Canal (31,000 af avg.)	15,000 af
Rag Gulch Water District	Kern River	Friant-Kern Canal (3,700 af avg.) Cross Valley Canal (13,300 af avg.)	
Saucelito Irrigation District	Tule River	Friant-Kern Canal (37,600 af avg.)	15,000 af
Stone Corral Irrigation District	NA	Friant-Kern Canal (10,000 af avg.)	5,000 af
Teapot Dome Irrigation District	NA	Friant-Kern Canal (5,600 af avg.)	
Terra Bella Irrigation District	NA	Friant-Kern Canal (29,000 af avg.)	2,000 af
Tulare Irrigation District	Kaweah River	Friant-Kern Canal (100,500 af avg.)	65,000 af

"There are 19 entities in Tulare County with active programs of groundwater management. These management programs include nearly all types of direct recharge of surface water. Groundwater recovery is accomplished primarily through privately owned wells. Among the larger programs of groundwater management are those administered by the Kaweah Delta Water Conservation District, the Kings River Water Conservation District, the Tulare Irrigation District, the Lower Tule Water Users Association, and the Alta Irrigation District, all utilizing water from the Friant-

[23] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 10-11.
[24] Bookman-Edmonston Engineering Inc. Water Resources Management in the Southern San Joaquin Valley. Table A-1.

Kern Canal and local streams. The Kings River Water Conservation District covers the western county."[25] A table of irrigation districts in Tulare County is shown in **Table 3.9-2**.

Irrigation Districts in Tulare County

"The Tulare County Resource Management Agency maintains a list of special districts that provide sewer and/or water service that cannot currently meet the demand of new development projects. The list provided by Tulare County RMA (last updated April 30, 2007) indicates that following water and/or sewer districts are either under a temporary cease and desist order by the Regional Water Control Board prohibiting any new connections, or have other limitations for water and sewer connections."[26]

"The Tulare County Resource Management Agency maintains a list of special districts that provide sewer and/or water service that cannot currently meet the demand of new development projects. The list provided by Tulare County RMA (last updated April 30, 2007) indicates that following water and/or sewer districts are either under a temporary cease and desist order by the Regional Water Control Board prohibiting any new connections, or have other limitations for water and sewer connections.

- Alpaugh Joint Powers Authority Water District;
- Cutler Public Utility District;
- Delft Colony Zone of Benefit (County RMA);
- Earlimart Public Utility District;
- El Rancho Zone of Benefit (County RMA);
- Orosi Public Utility District;
- Pixley Public Utility District;
- Pratt Mutual Water Company;
- Richgrove Public Utility District;
- Seville Zone of Benefit (County RMA);
- Seville Water Company;
- Springville Public Utility District;
- Tooleville Zone of Benefit (County RMA);
- Traver Zone of Benefit (County RMA); and
- Wells Tract Zone of Benefit (County RMA)."[27]

Much of the County land is rural in nature and requires the use of private wells. If a project utilizes water from an existing irrigation district, then it will be up to the irrigation district to determine if the Project could potentially create a significant impact related to water supply. An example of a potential impact could involve a need for a significant increase in the service levels of an irrigation district.

[25] Ibid. 10-12.
[26] Department of Water Resources, 2009. California Water Plan Update, Tulare Lake. Page TL-17.
[27] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 7-33.

Flooding

"Flooding is a natural occurrence in the Central Valley because it is a natural drainage basin for thousands of watershed acres of Sierra Nevada and Coast Range foothills and mountains. Two kinds of flooding can occur in the Central Valley: general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor; and snowmelt floods occurring in the late spring and early summer. Most floods are produced by extended periods of precipitation during the winter months. Floods can also occur when large amounts of water (due to snowmelt) enter storage reservoirs, causing an increase in the amount of water that is released."[28]

"Flood events in the Tulare Lake region are caused by rainfall, snowmelt, and the resultant rising of normally dry lakes. Although significant progress has been made to contain floodwaters in the region, improvements to the flood control system are still needed to lessen the flood risk to life and property."[29]

"Official floodplain maps are maintained by the Federal Emergency Management Agency (FEMA). FEMA determines areas subject to flood hazards and designates these areas by relative risk of flooding on a map for each community, known as the Flood Insurance Rate Map (FIRM). A 100-year flood is considered for purposes of land use planning and protection of property and human safety. The boundaries of the 100-year floodplain are delineated by FEMA on the basis of hydrology, topography, and modeling of flow during predicted rainstorms."[30]

"The flood carrying capacity in rivers and streams has decreased as trees, vegetation, and structures (e.g., bridges, trestles, buildings) have increased along the Kaweah, Kings, and Tule Rivers. Unsecured and uprooted material can be carried down a river, clogging channels and piling up against trestles and bridge abutments that can, in turn, give way or collapse, increasing blockage and flooding potential. Flooding can force waters out of the river channel and above its ordinary floodplain. Confined floodplains can result in significantly higher water elevations and higher flow rates during high runoff and flood events."[31]

"Dam failure can result from numerous natural or human activities, such as earthquakes, erosion, improper siting, rapidly rising flood waters, and structural and design flaws. Flooding due to dam failure can cause loss of life, damage to property, and other ensuing hazards. Damage to electric-generating facilities and transmission lines associated with hydro-electric dams could also affect life support systems in communities outside the immediate hazard area."[32]

REGULATORY SETTING

Water in California is managed by a complex network of federal, state, and local regulations. California administers rights to surface water at the state level, but not rights to groundwater, which

[28] Ibid. 8-13.
[29] California Water Plan Update 2009, Tulare Lake. Page TL-28 to TL-29.
[30] Tulare County General Plan 2030 Update, Background Report, February 2010, page 8-14.
[31] Ibid. 8-14.
[32] Op. Cit. 8-17.

is managed under a variety of authorities including local governments. Major regulatory policies pertaining to domestic water management are summarized below.

Federal Agencies & Regulations

Clean Water Act and National Pollutant Discharge Elimination System Permit Program

"The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972. "Clean Water Act" became the Act's common name with amendments in 1972… Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry. We have also set water quality standards for all contaminants in surface waters… The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters."[33]

National Toxics Rule and California Toxics Rule

In 1992, pursuant to the CWA, EPA promulgated the National Toxic Rule (NTR) criteria to establish numeric criteria for priority toxic pollutants for California. The NTR established water quality standards for 42 pollutants not covered at that time under California's statewide water quality regulations. As a result of a September 1994 court order that revoked California's statewide water quality control plan for priority pollutants, EPA initiated efforts to promulgate additional numeric water quality criteria for California. In May 2000, EPA issued the California Toxics Rule (CTR), which promulgated numeric water quality criteria for California. The CTR documentation (Volume 65, pages 31682-31719 of the Federal Register [65 FR 31682-31719] May 18, 2000, along with amendments in February 2001) carried forward the previously promulgated standards of the NTR, thereby providing a single document listing California's fully adopted water quality criteria for 126 priority pollutants.

Section 303 (d) Impaired Waters List

Section 303(d) of the CWA requires states to develop lists of water bodies (or sections of water bodies) that do not meet water quality standards after implementation of minimum required levels of treatment by point source discharges. Point sources include all sources subject to regulations under the National Pollutant Discharge Elimination System (NPDES) program, e.g. wastewater treatment facilities, some stormwater discharges and concentrated animal feeding operations. The intent of the Section 303(d) list is to identify water bodies that require future development of a

[33] EPA summary of the Clean Water Act – http://www.epa.gov/lawsregs/laws/cwa.html

Total Maximum Daily Load (TMDL) and associated implementation program to maintain water quality. Section 303(d) requires states to develop a TMDL for each of the listed pollutants and water bodies.[34]

Safe Drinking Water Act

"The Safe Drinking Water Act (SDWA) is the main federal law that ensures the quality of Americans' drinking water. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards… SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and ground water wells. (SDWA does not regulate private wells serving fewer than 25 individuals.)"[35]

Environmental Protection Agency

The mission of EPA is to protect human health and the environment.

EPA's purpose is to ensure that:

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;
- national efforts to reduce environmental risk are based on the best available scientific information;
- federal laws protecting human health and the environment are enforced fairly and effectively;
- environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- all parts of society - communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and
- The United States plays a leadership role in working with other nations to protect the global environment."[36]

U.S. Army Corps of Engineers

[34] United States EPA, What is a TMDL? Web, accessed September 25, 2017. http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/overviewoftmdl.cfm#responsibility
[35] EPA summary of the Safe Drinking Water Act – http://water.epa.gov/lawsregs/rulesregs/sdwa/index.cfm
[36] U.S. Environmental Protection Agency; http://www.epa.gov/aboutepa/whatwedo.html

"The Department of the Army Regulatory Program is one of the oldest in the Federal Government. Initially it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. Time, changing public needs, evolving policy, case law, and new statutory mandates have changed the complexion of the program, adding to its breadth, complexity, and authority.

The Regulatory Program is committed to protecting the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. The Corps evaluates permit applications for essentially all construction activities that occur in the Nation's waters, including wetlands."[37]

Executive Order 11988: Floodplain Management

Executive Order 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. In accomplishing this objective, Executive Order 11988 states that "each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities.

"In 1968 [National Flood Insurance Act of 1968], Congress created the National Flood Insurance Program (NFIP) to help provide a means for property owners to financially protect themselves. The NFIP offers flood insurance to homeowners, renters, and business owners if their community participates in the NFIP. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding."[38]
State Agencies & Regulations

State Agencies & Regulations

The Porter-Cologne Water Quality Control Act

"Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the State Water Resources Control Board (State Board) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine Regional Water Quality Control Boards (Regional Boards) to oversee water quality on a day-to-day basis at the local/regional level."[39]

State Water Quality Control Board

"The State Water Resources Control Board (State Water Board) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the State Water

[37] Army Corps of Engineers http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx
[38] Flood Insurance Program Summary: http://www.floodsmart.gov/floodsmart/pages/about/nfip_overview.jsp
[39] Porter-Cologne Water Quality Control Act Summary, http://ceres.ca.gov/wetlands/permitting/Porter_summary.html

Board to provide comprehensive protection for California's waters. The State Water Board consists of five full-time salaried members, each filling a different specialty position. Board members are appointed to four-year terms by the Governor and confirmed by the Senate."[40]

Regional Water Quality Control Board

"There are nine Regional Water Quality Control Boards (Regional Boards). The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology. Each Regional Board has seven part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality."[41]

"The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges. Specific responsibilities and procedures of the Regional Boards and the State Water Resources Control Board are contained in the Porter-Cologne Water Quality Control Act."[42]

California Anti-degradation Policy (SWRCB Resolution No. 68-16)[43]

Resolution No. 68-16, which is also known as the Board's Statement of Policy with Respect to Maintaining High Quality Waters in California, states, in part:

- Whenever the existing quality of water is better than the quality established in policies as the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any changes will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.
- Any activity which produces or may produce a waste or increased volume or concentration of wastewaters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

[40] State Water Board Website, http://www.waterboards.ca.gov/about_us/water_boards_structure/mission.shtm l
[41] Ibid.
[42] Central Valley Water Quality Control Board, http://www.swrcb.ca.gov/centralvalley/about_us/
[43] State Water Resources Control Board Resolution No. 68-16, http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/1968/rs68_016.pdf , Accessed, September 20, 2017.

The State Water Resources Control Board has interpreted Resolution 68-16 to incorporate the federal anti-degradation policy, which is applicable if discharge that began after November 28, 1975, will lower existing surface water quality.

California Department of Water Resources[44]

The Department of Water Resources' (DWR) primary mission is to manage the water resources of California in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural and human environments. Other goals include:

Goal 1 - Develop and assess strategies for managing the State's water resources, including development of the California Water Plan Update.
Goal 2 - Plan, design, construct, operate, and maintain the State Water Project to achieve maximum flexibility, safety, and reliability.
Goal 3 - Protect and improve the water resources and dependent ecosystems of statewide significance, including the Sacramento-San Joaquin Bay-Delta Estuary.
Goal 4 - Protect lives and infrastructure as they relate to dams, floods, droughts, watersheds impacted by fire and disasters, and assist in other emergencies.
Goal 5 - Provide policy direction and legislative guidance on water and energy issues and educate the public on the importance, hazards, and efficient use of water.
Goal 6 - Support local planning and integrated regional water management through technical and financial assistance.
Goal 7 - Perform efficiently all statutory, legal, and fiduciary responsibilities regarding management of State long-term power contracts and servicing of power revenue bonds.
Goal 8 - Provide professional, cost-effective, and timely services in support of DWR's programs, consistent with governmental regulatory and policy requirements.

Local Policies & Regulations

Tulare County Division of Environmental Health (DEH)

"The Tulare County Division of Environmental Health [DEH] provides oversight of septic waste collection and disposal vehicles to help verify adherence to local ordinances. Staff permit, inspect, investigate complaints and monitor activities of businesses engaged in the cleaning and disposal of septic systems, grease traps and portable toilets."[45] (see: http://tularecountyeh.org/eh/index.cfm/our-services/liquid-waste/).

"The Environmental Health Services Division oversees a variety of programs that relate to the health and safety of people and the environment such as: regulates retail food facilities (including restaurants, markets, bakeries, cottage food, public and private schools, mobile food facilities, temporary events (fairs and carnivals), vending machines and caterers" [see:

[44] California Department of Water Resources website, http://www.water.ca.gov/about/mission.cfm
[45] Environmental Health Services Division website; accessed March 29, 2017 at: http://tularecountyeh.org/eh/index.cfm/our-services/liquid-waste/

http://tularecountyeh.org/eh/index.cfm/our-services/food/][46]; hazardous materials (such as facilities that that handle hazardous materials, generate hazardous waste, treat hazardous waste, own/operate underground storage tanks, own/operate aboveground petroleum storage tanks, or handle other materials subject to the California Accidental Release Program) [see: http://tularecountyeh.org/eh/index.cfm/our-services/hazardous-materials-cupa/][47]; oversees the installation of water wells [see: http://tularecountyeh.org/eh/index.cfm/our-services/water-wells/][48]; permits and regulates State Small Water Systems [see: http://tularecountyeh.org/eh/index.cfm/our-services/water-systems-program/][49]; operates as the Local Enforcement Agency (LEA, which regulates landfills, transfer stations, composting sites and other specific solid waste activities) [see: http://tularecountyeh.org/eh/index.cfm/our-services/solid-waste/][50]; inspecting/permitting of dairies (Tulare County is one of eight counties in California designated as Approved Milk Inspection Services by the California Department of Food and Agriculture. Their mission is to ensure the safety and quality of dairy products consumed by the public through regulation and education; as such, Tulare County Registered Dairy Inspectors are responsible for the inspection and permitting of dairy farms located in Tulare *and* Kings County) [see http://tularecountyeh.org/eh/index.cfm/our-services/dairy/][51], among other duties.

Any project that involves septic tanks and water wells within Tulare County is subject to approval by this agency. All recommendations provided by this Division would be added as mitigation measures to ensure reduction of environmental impacts.

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below.

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

WR-1.1 Groundwater Withdrawal - The County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County.

[46] Ibid. see: http://tularecountyeh.org/eh/index.cfm/our-services/food/
[47] Op. Cit. see: http://tularecountyeh.org/eh/index.cfm/our-services/hazardous-materials-cupa/
[48] Op. Cit. see: http://tularecountyeh.org/eh/index.cfm/our-services/water-wells/
[49] Op. Cit. see: http://tularecountyeh.org/eh/index.cfm/our-services/water-systems-program/
[50] Op. Cit. see: http://tularecountyeh.org/eh/index.cfm/our-services/solid-waste/
[51] Tulare County Environmental Health Division, http://www.tularehhsa.org/index.cfm/public-health/environmental-health/

These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes.

WR-1.5 Expand Use of Reclaimed Wastewater - To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.

WR-1.6 Expand Use of Reclaimed Water - The County shall encourage the use of tertiary treated wastewater and household gray water for irrigation of agricultural lands, recreation and open space areas, and large landscaped areas as a means of reducing demand for groundwater resources.

WR-2.1 Protect Water Quality - All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - 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 Best Management Practices (BMPs) - 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.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

WR-3.3 Adequate Water Availability - The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

WR-3.6 Water Use Efficiency - The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

WR-1.5 Expand Use of Reclaimed Wastewater - To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.

PFS-1.8 Funding for Service Providers - The County shall encourage special districts, including community service districts and public utility districts to:

1. Institute impact fees and assessment districts to finance improvements,
2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and
3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems.

PFS-1.13 Municipal Service Reviews (MSRs) - The County shall use MSRs adopted by LAFCo and Urban Water Management Plans, as tools to assess the capacity, condition, and financing of various public utility services provided by special districts and cities, most commonly, domestic water and sanitary sewer.

PFS-3.3 New Development Requirements - The County shall require all new development, within UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing wastewater district service areas, or zones of benefit, to connect to the wastewater system, where such systems exist. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the wastewater system when service becomes readily available.

PFS-3.7 Financing - The County shall cooperate with special districts when applying for State and federal funding for major wastewater related expansions/upgrades when such plans promote the efficient solution to wastewater treatment needs for the area and County.

FGMP-8.4 Development of Wastewater Systems - The County shall ensure that new wastewater systems meet the standards of the Regional Water Quality Control Board and Tulare County Health & Human Services.

FGMP-9.2 Provision of Adequate Infrastructure - The County shall require evidence, prior to project approval, which (1) describes a safe and reliable method of wastewater treatment and disposal; and (2) substantiates an adequate water supply for domestic and fire protection purposes.

FGMP-9.5 Alternate Sewage Disposal - The County may allow unconventional methods of disposing of sewage effluent, provided the system meets the performance standards of the Water Quality Control Board and the Tulare County Health and Human Services Agency. Such systems may include, but are not limited to common leach field, soil absorption mounds, aerobic septic tanks, or evapotranspiration systems.

IMPACT EVALUATION

Will the project:

a) Violate any water quality standards or waste discharge requirements?

Project Impact Analysis: ***Less Than Significant Impact***

Stormwater (Surface Water Quality)

The Project would result in an upgrade/process change at the existing WWTP and the installation of underground sewer collection system pipelines throughout the Traver Community. The upgrades to the existing WWTP would not impact stormwater collection systems or produce additional stormwater quality or quantity that could impact water quality standards. The pipelines would be constructed within existing road rights-of-way and would be backfilled and reconstructed then returned to pre-construction conditions. No chemicals would be used in the construction or operation of the pipelines that could be discharged into surface water. The Project would not result in an increase of runoff that could cause stormwater impacts to any water quality standards (impacts to ground water quality are discussed below). Therefore, ***No Project-specific Impact*** would occur.

Ground Water Quality

One of the main issues being addressed by the proposed Project is water quality problems in the community of Traver due to the use of existing septic systems for certain residential, commercial and industrial properties.[52] Only the central portion of Traver is served by the existing sewage collection system and wastewater treatment facility. However, there are several existing land uses that are on septic systems and there is no capacity or infrastructure in place for anticipated new development to tie into the WWTP. Future development in Traver is anticipated as follows[53]:

- 200 single family homes
- A 100-room hotel
- 5 restaurants (Bravo Farms and others)

Existing WWTP

The existing WWTP for the Traver Community is a pond system with a permitted capacity of 88,000 GPD. The plant is operated under Order No. 88-098 Waste Discharge Requirement (WDR) issued by the Regional Water Quality Control Board. The plant headworks consists of a lift station only and does not have a screen for removal of large debris and rags. Treatment

[52] Traver Community Wastewater System Improvements, Attachment 1 – Plan of Study (2017), Page 2-1.
[53] Traver Community Wastewater System Improvements Technical Memorandum (2017). Page 2-1.

is accomplished through stabilization ponds. The effluent is discharged to percolation ponds where the treated water percolates into the groundwater.[54]

Proposed Project

The proposed Project includes upgrades to Traver's WWTP and sewer collection system. In order to eliminate the existing septic systems and to allow for anticipated future residential and commercial growth in the area, expansion of the WWTP would be accomplished using two 100,000 GPD capacity package treatment plants. Based on an assumed influent wastewater characterization, the effluent limits can be met with an activated sludge process with nitrification and denitrification capability.[55]

Once growth Traver begins, an initial 100,000 GPD package plant could be installed to handle the additional flows. The trigger for the design and installation of the first package plant would be when the average daily flow from Traver exceeds 70,400 GPD (80% of 88,000 GPD) for an entire quarter period of 3 months. A second 100,000 GPD package plant would be installed as growth continues and the average daily flows continue to increase. Planning for the second package plant would likely be triggered when the average daily flow reaches 80,000 GPD or 80% of the design capacity of the first package treatment plant.[56]

Groundwater Quality

The purpose of the proposed Project is to eliminate the groundwater quality issues associated with the existing septic systems in the Community and to provide adequate sewer capacity and sewer infrastructure for existing and future land uses.

According to the current WDR, sampling of the existing influent is not a current requirement by the State. The assumed content of the influent that was used to determine existing and proposed conditions are conservative estimates for raw influent based on accepted values and influent of similar communities in the Central Valley.

The current Traver WDR's require weekly effluent monitoring for dissolved oxygen and electrical conductance only. If the proposed Project is approved, the current WDR will need to be updated and new effluent limits will be imposed on the WWTP in order to dispose of effluent in percolation ponds (that will infiltrate groundwater). These limits are:

BOD_5	30 mg/L
TSS	30 mg/L
TO_3-N	10 mg/L

It is anticipated that the Monitoring and Reporting Requirements that would be issued with the WDR's would include groundwater monitoring requirements. The groundwater monitoring

[54] Traver Community Wastewater System Improvements Technical Memorandum (2017). Page 3-1.
[55] Ibid. Page 3-2.
[56] Ibid. Page 3-3.

requirements would be used by the Regional Board to verify the effluent discharges via percolation or irrigation do not degrade the underlying groundwater. The monitoring would involve sampling from monitoring wells. Because of these requirements, and regulation/oversight of the RWQCB, the proposed Project would not violate any water quality standards or waste discharge requirements.

The proposed sewer collection pipelines would not impact water quality. Minimal water may be used during construction phases for dust suppression. No chemicals will be used in the construction or operation of the pipelines that could be discharged into ground water.

Therefore, ***Less Than Significant Project-specific Impacts*** to groundwater would occur.

Cumulative Impact Analysis: ***No Impact***

As noted earlier, the Project would require a minimal amount of water to be used during the construction activity phases for dust suppression and would not contribute enough water to impact ground water quality. On-going use of the Project would involve wastewater that is treated and discharged to holding ponds for eventual percolation into the ground. As described earlier, ground water quality will be maintained through monitoring of effluent quality prior to pond disposal as well as use of groundwater monitoring to ensure State standards are met. Construction and operation of the proposed sewer system pipelines would not result in stormwater runoff or the potential for surface or groundwater contamination. No chemicals would be used in the construction or operation of the pipelines that could be discharged into surface or ground water. Therefore, the Project would result in ***No Cumulative Impacts*** to surface or groundwater quality.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific impacts would be ***Less Than Significant*** and ***No Cumulative Impacts*** related to this Checklist Item would occur.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there will be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells will drop to a level which will not support existing land uses or planned uses for which permits have been granted)?

Project Impact Analysis: ***Less Than Significant Impact***

The proposed Project would not require the construction of a new well. As a result of this Project, the rate/usage of water currently used for septic systems is not anticipated to change; rather, the wastewater discharge will be directed to the wastewater collection system ultimately reaching the Community's WWTP. The proposed Project includes an expansion of WWTP

capacity, which ultimately would result in additional wastewater being treated and then pumped to holding ponds for eventual percolation into the ground. It should be noted that increased use of ground water that could result from future residential and commercial development in the Community of Traver was addressed in the Traver Community Plan GPA 14-003 Mitigated Negative Declaration (2014). Also, minimal water may be used during construction phases for dust suppression. The Project itself will provide a small benefit to ground water by accepting wastewater that would otherwise be sent to individual septic systems and then treating that wastewater for eventual percolation into ground water. Therefore, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

As noted above, the proposed Project will not increase water use and will provide a small beneficial impact by increasing the amount of groundwater that would otherwise be sent to individual septic systems. Minimal water may be used during construction phases for dust suppression. Therefore, ***Less Than Significant*** cumulative impacts to groundwater would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific and cumulative impacts would be ***Less Than Significant*** related to this Checklist Item.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which will result in substantial erosion or siltation on- or off-site?

Project Impact Analysis: ***No Impact***

The proposed Project would not result in increased runoff. The improvements to the existing WWTP will occur within the existing WWTP footprint and will not include impervious surfaces that would substantially change the existing drainage pattern. The sewer system pipelines would be constructed within existing road rights-of-way which are highly disturbed. Following construction-related activities, the trenches would be backfilled and restored to roadways and gravel roadway shoulders. Therefore, the Project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. There would be ***No Project-specific Impact***.

Cumulative Impact Analysis: ***No Impact***

The Project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which will result in flooding on- or off-site?

Project Impact Analysis: ***No Impact***

The proposed Project would not result in increased runoff. The improvements to the existing WWTP will occur within the existing WWTP footprint and will not include impervious surfaces that would substantially change the existing drainage pattern. The sewer system pipelines would be constructed within existing road rights-of-way which are highly disturbed. Following construction-related activities, the trenches would be backfilled and restored to roadways and gravel roadway shoulders. Therefore, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Therefore, there would be ***No Project-specific Impact***.

Cumulative Impact Analysis: ***No Impact***

The Project would not alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

e) Create or contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Project Impact Analysis: ***No Impact***

The proposed Project would not result in increased runoff. The improvements to the existing WWTP will occur within the existing WWTP footprint and will not include impervious surfaces that would substantially change the existing drainage pattern. The sewer system pipelines would be constructed within existing road rights-of-way which are highly disturbed and typically collect stormwater runoff from the roadways. Following construction-related activities, the trenches would be backfilled and restored to roadways and gravel roadway shoulders. Therefore, the Project would not 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. As such, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board. As such, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

f) Otherwise substantially degrade water quality?

Project Impact Analysis: ***No Impact***

The Project does not include elements that could degrade water quality. Therefore, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the requirements of the Central Valley Regional Water Quality Control Board.

As noted earlier, the Project does not include elements that could degrade water quality. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Project Impact Analysis: ***No Impact***

The Project does not include the construction of any housing units. Therefore, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project does not include any housing units. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

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Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

h) Place within a 100-year flood hazard area structures which will impede or redirect flood flows?

Project Impact Analysis: ***Less Than Significant Impact***

The Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM) numbers 06107C0605E and 06107C0615E show that approximately half of the proposed sewer system collection pipelines would be located in Flood Zone A (100 Year Flood Zone – no base flood elevations determined). The remainder of the pipelines and the existing WWTP are located in Flood Zone X (outside floodplain).[57] The proposed sewer collection pipelines will be installed underground and will not impact existing drainage patterns. The existing WWTP is located outside of the 100-year floodplain, but it has been designed to withstand flooding without impacting adjacent properties. As such, potential for flood impacts in these areas is considered minimal. Therefore, Project-specific impacts would be ***Less Than Significant***.

[57] Traver Community Sewer Collection and WWTP Evaluation Supplement (2005). Provost & Pritchard. Exhibit 7.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Project would not have off-site impacts related to flooding. In addition, the Project would not induce additional flooding hazards, on-site or off-site. Therefore, ***Less Than Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, ***Less Than Significant Project-specific*** **and** ***Cumulative Impacts*** related to this Checklist Item would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Project Impact Analysis: ***No Impact***

"Two major dams could cause substantial flooding in Tulare County in the event of a failure: Terminus Dam and Success Dam. In addition, there are many smaller dams throughout the county that will cause localized flooding in the event of their failing."[58] The nearest dam to Traver is Pine Flat Dam (in Fresno County) located approximately 28 miles northeast of the community.

The Project area is not within the inundation areas for Terminus or Success Dams in Tulare County; or Pine Flat Dam in Fresno County. In addition, the Project does not involve water storage or changing the alignment of an established watercourse. Therefore***, no Project-specific impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project is not within the inundation area for either major dam in Tulare County or Pine Flat Dam in Fresno County. The Project would not have any impacts either on-site or on other off-site parcels. Therefore, ***No Cumulative Impacts*** would occur.

[58]Tulare County General Plan 2030 Update, Background Report, February 2010. Page 8-17.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

j) Inundation by seiche, tsunami, or mudflow?

Project Impact Analysis: ***No Impact***

The Project area is not near any major body of water. The improvements to the existing WWTP will occur within the existing WWTP footprint. The pipelines would be constructed within existing road rights-of-way which are highly disturbed and typically collect stormwater runoff from the roadways. Following construction-related activities, the trenches would be backfilled and restored to roadways and gravel roadway shoulders. Therefore, ***no Project-specific impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project is not located near a large body of water, the coast or hillsides. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

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Chapter 3.10

Land Use and Planning

SUMMARY OF FINDINGS

The Preferred/Proposed Project would result in ***No Impact*** to Land Use and Planning. As noted earlier, this document has been prepared using the Preferred Alternative as the proposed Project. As such, the following discussion refers to the "Preferred/Proposed Project" as "the Project". A detailed review of potential impacts is provided in the analysis below.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Land Use and Planning. As required in CEQA Guidelines Section 15126, all phases of the Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

[1] CEQA Guidelines, Section 15126.2 (a)

The environmental setting provides a description of the Land Use and Planning setting in the County. The regulatory setting provides a description of applicable federal, state and local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report and/or Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Divide and established community
- Conflict with applicable land use pan policy, or regulation of an agency with jurisdiction over the Project
- Conflict with an applicable habitat conservation plan

ENVIRONMENTAL SETTING

Tulare County is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin Valley floor, which is very fertile and extensively cultivated. In addition to its agricultural production, the County's economic base also includes agricultural packing and shipping operations. Small and medium-sized manufacturing plants are located in the western part of the county and are increasing in number. Tulare County contains portions of Sequoia National Forest, Sequoia National Monument, Inyo National Forest, and Kings Canyon National Park. Sequoia National Park is entirely contained within the county.

The County encompasses approximately 4,840 square miles of classified lands (lands with identified uses) and can be divided into three general topographical zones: a valley region; a foothill region east of the valley area; and a mountain region just east of the foothills. The eastern half of the county generally comprises public lands, including the Mountain Home State Forest, Golden Trout Wilderness area, and portions of the Dome Land and south Sierra Wilderness areas. Federal lands, which include wilderness, national forests, monuments and parks, along with County parks, make up 52 percent of the County, the largest percentage found in the County. Agricultural uses, which include row crops, orchards, dairies, and grazing lands on the Valley floor and in the foothills total over 2,020 square miles or about 43 percent of the entire County. Urban uses such as incorporated cities, communities, hamlets, other unincorporated urban uses, and infrastructure rights-of-way make up the remaining land in the County.

"Land use in Tulare County is predominately agriculture, and the County is committed to retaining the rich agricultural land. The foothill and mountain regions are controlled predominantly by the State and federal governments. However, as population increases, so does the demand for new housing, retail and commercial space. Agricultural land around the cities is being converted into urban uses. Housing, land, employment and economics are balanced to

minimize the amount of agricultural land taken by development. Economic principles tend to take precedence over the conservation of land."

"Tulare County has been one of the faster growing counties in the state. Since 1950, its annualized growth rate is 1.8% (2.0% since 1980). Population growth has been primarily in the incorporated cities versus the unincorporated county…"[2]

As indicated in the 2014 Regional Transportation Plan & Sustainable Communities Strategy, Draft Environmental Impact Report (SCH #2012081070); "Tulare County is predominantly rural, and settlement patterns reflect this fact. Approximately 32% of the county's population of 455,599 people, live outside the county's eight incorporated areas (California Department of Finance, 2013). There are 21 unincorporated communities in Tulare County. Recent trends have led to housing, jobs, shopping, and recreational opportunities developing in separate locations. As a result of the separated development of jobs and housing, the urban area has grown in a way that forces people to travel from one area to another. The relatively large distances between the county's population centers require well-maintained rural highways, many of which are the focus of RTP projects.

As of December 2012, about 174,900 people were employed in Tulare County and the unemployment rate was 15.7% (California Employment Development Department, 2013). By comparison, the statewide unemployment rate was 9.7% during that month, while the national rate was only 7.6%.

TCAG Traffic Model projections indicate that population in the Tulare County region is expected to grow from 466,008 people in 2010 to 700,832 by the year 2035 for an increase of approximately 50 percent. Between 2010 and 2035 employment is expected to increase by over 85,000 jobs or by almost 46 percent (TCAG, April 2010)."[3]

As of May 1, 2017, population estimates produced annually by the Department of Finance calculated Tulare County with a population estimate of 466,563 residents[4]. The State Controller's Office uses Finance's estimates to update their population figures for distribution of state subventions to cities and counties, and to comply with various state codes. Additionally, estimates are used for research and planning purposes by federal, state, and local agencies, the academic community, and the private sector.

Community of Traver

The Traver Urban Development Boundary area consists of approximately 368 acres. SR 99, one of the busiest north-south arterial routes in California, passes through the westerly portion of the Community. There are a variety of land uses along SR 99 including a mix of industrial, agricultural and commercial uses. The west side of SR 99 is dominated by agricultural uses.

[2] 2011 California Department of Finance, htt://www.dof.ca.gov/research/demographic/
[3] 2014 RTR/SCS PEIR. Page 4.10-2.
[4] California Department of Finance, May 1, 2017 E-1 Population Estimates for Cities, Counties, and the State – January 1, 2016 and 2017 Accessed June 6, 2017. http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/

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.[5]

Existing Zoning and Land Use Designations

Traver is located entirely within the County of Tulare, and also entirely within the Alta Irrigation District and Kings River Conservation District boundaries. The Traver Community Plan includes the following land use designations within its boundaries: Residential Medium Density, Commercial, Industrial, Public/Quasi Public, Residential Reserve, Industrial Reserve.

The existing wastewater treatment facility is located east of the Community boundaries within and surrounded by a chain-link fenced parcel that is zoned AE-20 (Exclusive Agricultural Zone 20-Acre Minimum). The proposed pipeline collection system is located throughout the Community on a variety of land use zones including: AE-40 (Exclusive Agricultural Zone 40-Acre Minimum), R-1 (Single Family Residential Zone), R-2 (Two Family Residential Zone), R-A (Rural Residential Zone), C-2 (General Commercial Zone), C-2 SR (General Commercial/Site Plan Review Combining Zone), C-3 (Service Commercial Zone), M-1 (Light Manufacturing Zone).

REGULATORY SETTING

Federal Agencies & Regulations – None that apply to the Project.

State Agencies & Regulations– None that apply to the Project.

Local Policy & Regulations

Tulare County Association of Governments

"The Tulare County Association of Governments (TCAG) is responsible for overseeing and planning projects with the county and each of its cities, helping to bring tax money back home to fund bus service, road improvements, projects that will improve our air quality, and more."[6] TCAG's 2009 Regional Blueprint includes a goal of a 25% increase in land use densities facilitated with urban growth and expansion of transportation facilities[7]. The project would not be counter to any goals contained in the Regional Blueprint as it is limited to construction of a wastewater collection system and process upgrades at the existing wastewater treatment facility. The project is being developed in order to serve existing residences and businesses that do not have connections and to provide capacity for future land uses that may be built out according to

[5] Traver Community Plan Update (2014), Page 13.
[6] Tulare County Council of Governments (TCAG) Website, http://www.tularecog.org/
[7] TCAG - Tulare County Regional Blueprint. Page 19. Accessed May 20, 2014, http://valleyblueprint.org/files/Tulare050109.pdf

the Traver Community Plan. Implementation of the project will not result in growth beyond what is already planned for in the Community Plan.

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below.

PF-6.4 UDBs and Interagency Coordination - The County shall use UDBs to provide a definition of an urban area for other planning programs, such as:

1. The area within the UDB should be considered as the same area for which water and sewer system planning may be needed and to be a consideration in the determination of an area required to adequately assess the availability and sufficiency of water supplies.
2. UDBs should be used to define traffic analysis zones in the Regional Transportation Plan program.
3. The UDBs shall be used to provide a framework for inventories on growth and development, as well as socio-economic data

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - 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-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

PFS-1.5 Funding for Public Facilities - The County shall implement programs and/or procedures to ensure that funding mechanisms necessary to adequately cover the costs related to planning, capital improvements, maintenance, and operations of necessary public facilities and services are in place, whether provided by the County or another entity.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-3.5 Wastewater System Failures - The County shall require landowners to repair failing septic tanks, leach field, and package systems that constitute a threat to water quality and public health or connect to an existing community system through applicable County and/or Regional Water Quality Control Boar standards and requirements.

IMPACT EVALUATION

Would the project:

a) Physically divide an established community?

Project Impact Analysis: ***No Impact***

The proposed upgrades to the wastewater treatment facility and construction of underground wastewater pipelines (sewer collection system) does not have the potential to physically divide an established community. The existing wastewater treatment ponds are located east of the community and there are no proposed changes to the facility boundaries. The pipelines would be constructed within existing road rights-of-way and would be trenched in areas generally consisting of gravel road shoulders. There is one section of pipeline that will be required to jack and bore under an existing railroad. Occasionally, pipelines would require trenching through paved roadways to connect to other components of the pipeline infrastructure. The trenches would be backfilled and restored to paved roadways and gravel roadway shoulders along each segment of roadway/shoulders as installation/construction of pipeline, or other subsurface appurtenances is completed. After completion of the Project, there would be no physical components that would divide an established community. As such, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Since the Project does not have to potential to physically divide an established community, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there would be ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

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

Project Impact Analysis: ***No Impact***

As indicated in Tulare County General Plan Policy **AG-1.10**, Extension of Infrastructure into Agricultural Areas – "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." The Project is being developed in order to serve existing residences and businesses that do not have connections and to provide capacity for future land uses that may be built out according to the Traver Community Plan.

The proposed wastewater pipelines would be sized to serve the community's existing needs (including potential infill development and within the community's Urban Area Boundary) and would provide additional capacity that could accommodate future residential/commercial/industrial growth as outlined in the Traver Community Plan. Since the Project would not result in substantial growth that is not already accounted for in the County's planning documents, and is generally consistent with the existing conditions in the Community of Traver, it would not conflict with the Tulare County General Plan. As noted earlier, the Project would be consistent with several Tulare County General Plan policies.

Therefore, there would be ***No Project-specific Impact***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Since the Project would not conflict with any applicable land use plan, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there are ***No Project-specific or Cumulative Impacts*** related to this Checklist item.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

Project Impact Analysis: ***No Impact***

There are two habitat conservation plans that apply in Tulare County. The Kern Water Habitat Conservation Plan only applies to an area near Allensworth (located in southwestern Tulare County), thus the Project is not subject to this Plan. The Recovery Plan for Upland Species in the San Joaquin Valley outlines a number of species that are important to the San Joaquin Valley. None of these species were identified on the in relation to the Project. As such, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

There are no impacts related to habitat conservation plans, and, therefore, there are ***No Cumulative Impacts*** that would conflict with local policies or ordinances.

Mitigation Measure(s): ***None Required***

Conclusion:

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

REFERENCES

2014-2040 Regional Transportation Plan & Sustainable Communities Strategy, adopted June 30, 2014 which can be accessed at:
http://www.tularecog.org/wp-content/uploads/2015/06/Final-2014-Regional-Transportation-Plan-Sustainable-Communities-Strategy-FULL-DOCUMENT.pdf

Tulare County 2030 General Plan, Background Report, and EIR

California Department of Finance, May 1, 2017 E-1 Population Estimates for Cities, Counties, and the State – January 1, 2016 and 2017 Accessed June 6, 2017 at:
http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/

2011 California Department of Finance, http://www.dof.ca.gov/research/demographic/

Tulare County Association of Governments (TCAG) Website, http://www.tularecog.org/

CEQA Guidelines

Traver Community Plan 2014 Update, which can be accessed at:
http://tularecounty.ca.gov/rma/index.cfm/planning/

Chapter 3.11

Mineral Resources

SUMMARY OF FINDINGS

The proposed Project would result in ***No Impacts*** related to Mineral Resources, and therefore, no mitigation measures are required. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Mineral Resources. As required in Guidelines Section 15126, all phases of the Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2(a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g. floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

[1] California Environmental Quality Act, CEQA Guidelines Section 15126.2 (a)

The environmental setting provides a description of the Mineral Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in Plan the Tulare County 2030 General Plan, the Tulare County General Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The Tulare County 2030 General Plan identifies known Mineral Resource areas within the County jurisdictional boundary. The threshold of significance for this section will include the following:

- Impact a known Mineral Resource
- Site located in a Mineral Resource Zone area (as noted in the General Plan)

ENVIRONMENTAL SETTING

"There is estimated to be a total of 932 million tons of aggregate resources in Tulare County. This figure includes 219 million tons of reserves available for mining and 200 million tons that are located in the hard rock quarries southeast of Porterville. Of that total, 19 million tons are located in Northern Tulare County, which is expected to be depleted by the year 2010 unless new resources are permitted for mining. Lemon Cove has been the most highly extracted area for PCC quality aggregate supplies."[2]

"Economically, the most important minerals that are extracted in Tulare County are sand, gravel, crushed rock and natural gas. Other minerals that could be mined commercially include tungsten, which has been mined to some extent, and relatively small amounts of chromite, copper, gold, lead, manganese, silver, zinc, barite, feldspar, limestone, and silica. Minerals that are present but do not exist in the quantities desired for commercial mining include antimony, asbestos, graphite, iron, molybdenum, nickel, radioactive minerals, phosphate, construction rock, and sulfur. The majority of these activities appear to occur in the Sierra Foothill Area."[3]

"The following MRZ categories are used by the State Geologist in classifying the State's lands. The geologic and economic data and the arguments upon which each unit MRZ assignment is based are presented in the mineral land classification report transmitted by the State Geologist to the SMGB.

A. *MRZ-1*—Areas where adequate geologic information indicates that no significant

[2] Tulare County General Plan Update 2030, Background Report, February 2010. Page 10-18.
[3] Ibid. 10-17.

mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone is applied where well developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight.

B. *MRZ-2a*—Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. As shown on the diagram of the California Mineral Land Classification System, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.

C. *MRZ-2b*—Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exist, or where there is an exposure of mineralization of economic importance.

D. *MRZ-3a*—Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. As shown on the diagram of the California Mineral Land Classification System, MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of a MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.

E. *MRZ-3b*—Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ- 3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An

example of a MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure which indicates the possible presence of a mineral deposit or that an ore-forming process was operative.

F. *MRZ-4*—Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories."[4]

REGULATORY SETTING

Federal Agencies & Regulations

No Federal Agencies or Regulations apply to the Project.

State Agencies & Regulations

Surface Mining and Reclamation Act of 1975 (SMARA)

"The Surface Mining and Reclamation Act (SMARA), Chapter 9, Division 2 of the Public Resources Code, requires the State Mining and Geology Board to adopt State policy for the reclamation of mined lands and the conservation of mineral resources. These policies are prepared in accordance with the Administrative Procedures Act (Government Code Section 11430 et seq.,) and are found in California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1.

The Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code Sections 2710-2796) provides a comprehensive surface mining and reclamation policy with the regulation of surface mining operations to assure that adverse environmental impacts are minimized and mined lands are reclaimed to a usable condition. SMARA also encourages the production, conservation, and protection of the state's mineral resources. Public Resources Code Section 2207 provides annual reporting requirements for all mines in the state, under which the State Mining and Geology Board is also granted authority and obligations."[5]

State Mining & Geology Board (SMGB)

[4] Guidelines for Classification and Designation of Mineral Land. Pages 4 to 6. http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf
[5] SMARA Description, http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx

"The SMGB serves as a regulatory, policy, and appeals body representing the State's interests in geology, geologic and seismologic hazards, conservation of mineral resources and reclamation of lands following surface mining activities. The SMGB operates within the Department of Conservation, and is granted certain autonomous responsibilities and obligations under several statutes including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and the Surface Mining and Reclamation Act."[6]

The Office of Mine Reclamation (OMR)

The Office of Mine Reclamation was created in 1991 to administer the SMARA requirements. OMR provides assistance to cities, counties, state agencies and mine operators for reclamation planning and promotes cost-effective reclamation. OMR strives to reclaim mined lands to a beneficial end-use through the implementation of SMARA, prevent or minimize the adverse environmental effects of mining by providing assistance to lead agencies and miners in the review of reclamation plans, and minimize residual hazards to public health and safety through the Abandoned Mine Lands program."[7]

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed below.

ERM-2.1 Conserve Mineral Deposits - The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate[8].

ERM-2.2 Recognize Mineral Deposits - The County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits[8].

ERM-2.10 Incompatible Development - Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.[8]

IMPACT EVALUATION

Would the project:

[6] State Mining & Geology Board (SMGB), http://www.conservation.ca.gov/smgb/Pages/Index.aspx
[7] Office of Mine Regulation, http://www.conservation.ca.gov/OMR/Pages/Index.aspx
[8] Tulare County General Plan Update 2030, Adopted August 28, 2012. Page 8-11.

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?

Project Impact Analysis: ***No Impact***

Mineral Resources located in central Tulare County are predominantly sand and gravel resources near waterways. According to the Tulare County General Plan 2030 Update (see Figure 10-1, page 10-19), the Kaweah River, Lewis Creek, and the Tule River are the sand and gravel resources in Tulare County. As the Community of Traver is located more than 10 miles away from any of these waterways, the Project area is not located in a known mineral resource zone MRZ.[9]

The pipelines would be constructed within existing road rights-of-way which are highly disturbed and typically collect stormwater runoff from the roadways. The pipelines would be trenched in the rights-of-way which generally consist of gravel road shoulders (which is typical of roadways in the area). Occasionally, pipelines would require trenching through paved roadways to connect to other components of the pipelines infrastructure. At least one lift station (or other appurtenant structures) will be necessary for the Project; final engineering and design would determine any surface or subsurface location(s). Following completion of construction-related activities, the trenches would be backfilled and restored to roadways and gravel roadway shoulders along each segment of roadway/shoulders as installation and/or construction of pipeline, lift stations, or other subsurface appurtenances is completed. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***
The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project does not include mining operations and is not located within a known mineral resource zone. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted above, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

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?

[9] Background Report Tulare County General Update 2030. Page 10-19. Accessed September 20, 2017 at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf

Project Impact Analysis: ***No Impact***

As noted in the Response to Item 3.11 a), the Project does not include a mining operation and the Project site is not located in or near a known mineral resource zone. There would be no significant loss of local important mineral resource recovery site. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted in the Response to 3.11 a), the Project does not include a mining operation and is not located within a mineral resource zone. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

REFERENCES

California State Department of Conservation, Guidelines for Classification and Designation of Mineral Land (page 4 to 6) which can be accessed at: http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf

California State Department of Conservation, MRZ classification, which can be accessed at: http://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf

California State Department of Conservation, Office of Mine Regulation, which can be accessed at: http://www.conservation.ca.gov/OMR/Pages/Index.aspx

California State Department of Conservation, SMARA Description, which can be accessed at: http://www.conservation.ca.gov/smgb/Regulations/Pages/regulations.aspx

California State Department of Conservation, State Mining & Geology Board (SMGB), which can be accessed at: http://www.conservation.ca.gov/smgb/Pages/Index.aspx

Background Report Tulare County General Update 2030. Which can be accessed at: http://generalplan.co.tulare.ca.us/documents/GeneralPlan2010/Appendix%20B%20-%20Background%20Report.pdf

Tulare County 2030 General Plan Update

U.S. Geology Survey, which can be accessed at: http://mrdata.usgs.gov/mineplant/show-mineplant.php?id=815

Chapter 3.12

Noise

SUMMARY OF FINDINGS

The proposed Project would result in ***Less Than Significant Impact*** related to Noise. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. Also, the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "F", *"Noise Study Report"* prepared by VRPA Technologies is incorporated by reference. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts related to noise. As required in CEQA Guidelines Section 15126, all phases of the proposed Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2 a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed Project. In assessing the impact of a proposed Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the Project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."

The environmental setting provides a description of the Noise Setting in Tulare County. The regulatory setting provides a description of applicable Federal, State, and local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA THRESHOLDS OF SIGNIFICANCE

The thresholds of significance for this section are established by the CEQA checklist item questions. The following are potential thresholds for significance:

- Exceed Tulare County Standards for Noise Levels
- Expose people of excessive ground borne vibration
- Expose people to excessive airport/airstrip noise

ENVIRONMENTAL SETTING

The Project is located in the rural unincorporated portion of northwest Tulare County, which is in a generally rural environment but, also north of the City of Visalia (approximately 10 miles north). The unincorporated community of Traver is primarily a bedroom community with the majority of its land uses consisting of single-family detached residential units, including commercial uses, industrial uses, and religious establishments.

The 2014-2040 Tulare County Association of Governments (TCAG), Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS), Draft Environmental Impact Report (Draft EIR), SCH #2012081070, provides an excellent summary of how sound (that is, noise and vibration) are measured and major noise sources in Tulare County as follows:

"**a. Overview of Sound Measurement**

Noise. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, Leq is summed over a one-hour period.

Sound pressure is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while noise levels along arterial streets are generally in the 50 to 60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than that can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.11 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed (Ldn). Ldn is the time average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 PM and 7:00 AM to account for the general increased sensitivity of people to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is identical to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 PM to 10:00 PM). Thus, both the Ldn and CNEL noise measures represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

Vibration. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, groundborne vibration levels rarely affect human health. Instead, most people consider groundborne vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of groundborne vibration can damage fragile buildings or interfere with equipment that is highly sensitive to groundborne vibration (e.g., electron microscopes).

In contrast to noise, groundborne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 RMS or lower which is well below the threshold of perception for humans (human perception is around 65 RMS). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel- wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

b. Noise Sources. Ambient noise levels in Tulare County vary widely depending upon proximity to noise generators…"[1]

As noted in the 2014 TCAG RTP/SCS Draft EIR, "Tulare County contains a number of different industrial operations that produce noise, including food processing plants as well as sand and gravel extraction and processing facilities. Noise measurements were conducted for the General Plan 2030 Update at a sand and gravel extraction and processing facility operated by the Kaweah River Rock Company southeast of Woodlake. Excavation equipment that can generate noise at this facility consists of backhoes, graders, loaders, a drag line and off-road haul trucks. At anyone time, it is common to have the drag line, backhoe or one of the loaders working in conjunction with the off-road haul trucks. Noise levels at 700 feet from such an excavation operation would be expected to range approximately from 47.5 to 66.5 dBA. The processing area of the operation noise levels of approximately 77 dBA at a distance of 200 feet from the source (Tulare County, 2007)."[2]

The Health and Safety section of Tulare County's 2030 General Plan serves as the primary policy statement for the County for implementing policies to maintain and improve the noise environment in Tulare County. **Table 3.12-1** shows Tulare County's Land Use Compatibility for Community Noise Environments.

"Noise level data collected during continuous monitoring included the hourly Leq and Lmax and the statistical distribution of noise levels over each hour of the sample period. The community noise survey results indicate that typical noise levels in noise-sensitive areas of the unincorporated areas of Tulare County are in the range of 29-65 dB Ldn. As would be expected, the quietest areas are those that are removed from major transportation-related noise sources and industrial or stationary noise sources."[3]

"There are a variety of sources that produce noise in the Traver Plan Area and include traffic, railroad operations, airport operations, and agricultural operations. Traffic noise is the most dominant source of ambient noise in the County, according to the Tulare County General Plan EIR. SR 99 runs through the Traver Plan Area and is the largest source of traffic noise in the area due to the high volumes of traffic. Noise from SR 99 adversely impacts an area through

[1] 2014 TCAG RTP/SCS Draft EIR. Page 4.11-2.
[2] Ibid. 4.11-4.
[3] Tulare County General Plan 2030 Update Background Report. Page 8-77.

Traver making properties in close proximity to the highway less desirable for new housing construction.

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 twenty (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 thereby impacting adjacent land uses whenever a train passes through the community.

The 2010 RDEIR prepared for the Tulare County General Plan Update included the following information regarding freeway and railroad noise. Baseline traffic noise contours for major roads in the County were developed using Sound32 (Caltrans' computer implementation of the FHWA Traffic Noise Prediction Model). Table 3.5-3 in the RDEIR summarized the daily traffic volumes, and the predicted Ldn noise level at 100 feet from the roadway centerline is approximately 79 feet, and the distance from the roadway centerline to the 60-, 65-, and 70-dB-Ldn contours are 82 feet, 1,813 feet, and 3,907 feet respectively.

Mainline operations on the Union Pacific Railroad in Tulare County affect the community of Traver. According to the Trainmaster's office in Fresno, there are more than 20 freight train operations per day in the Tulare County Area. Passenger trains presently do not operate on Union Pacific tracks in Tulare County. Train speeds on the mainline are generally 45-65 mph and train movements may occur at any time during the night or day. According to the Wyle methodology, the above-described type and frequency of operation results in noise exposures of 65 and 60 dB Ldn at approximately 335 and 660 feet, respectively, from the center of the tracks for present operations, and at approximately 440 and 800 feet, respectively, from the center of the tracks for estimated future operations. Noise levels in the vicinity of grade crossings are somewhat higher than this due to the use of the warning horn."[4]

The sanitary sewer collection system pipelines that would be installed within the Community of Traver would be located within County roadways using open-trench construction. Construction-related disturbance would also occur near the terminus of existing pipelines or where new pipeline connections would be introduced.

Table 3.12-1
Land Use Compatibility for Community Noise Environments [5]

	Community Noise Exposure-Ldn or CNEL (dB)						
Land Use Category	**50**	**55**	**60**	**65**	**70**	**75**	**80**
Residential - Low Density Single Family, Duplex, Mobile Homes							

[4] Traver Community Plan 2014 Update. Tulare County. Page 18
[5] Tulare County General Plan 2030 Update, Goals & Policies Report. Page 10-25.

Table 3.12-1
Land Use Compatibility for Community Noise Environments [5]

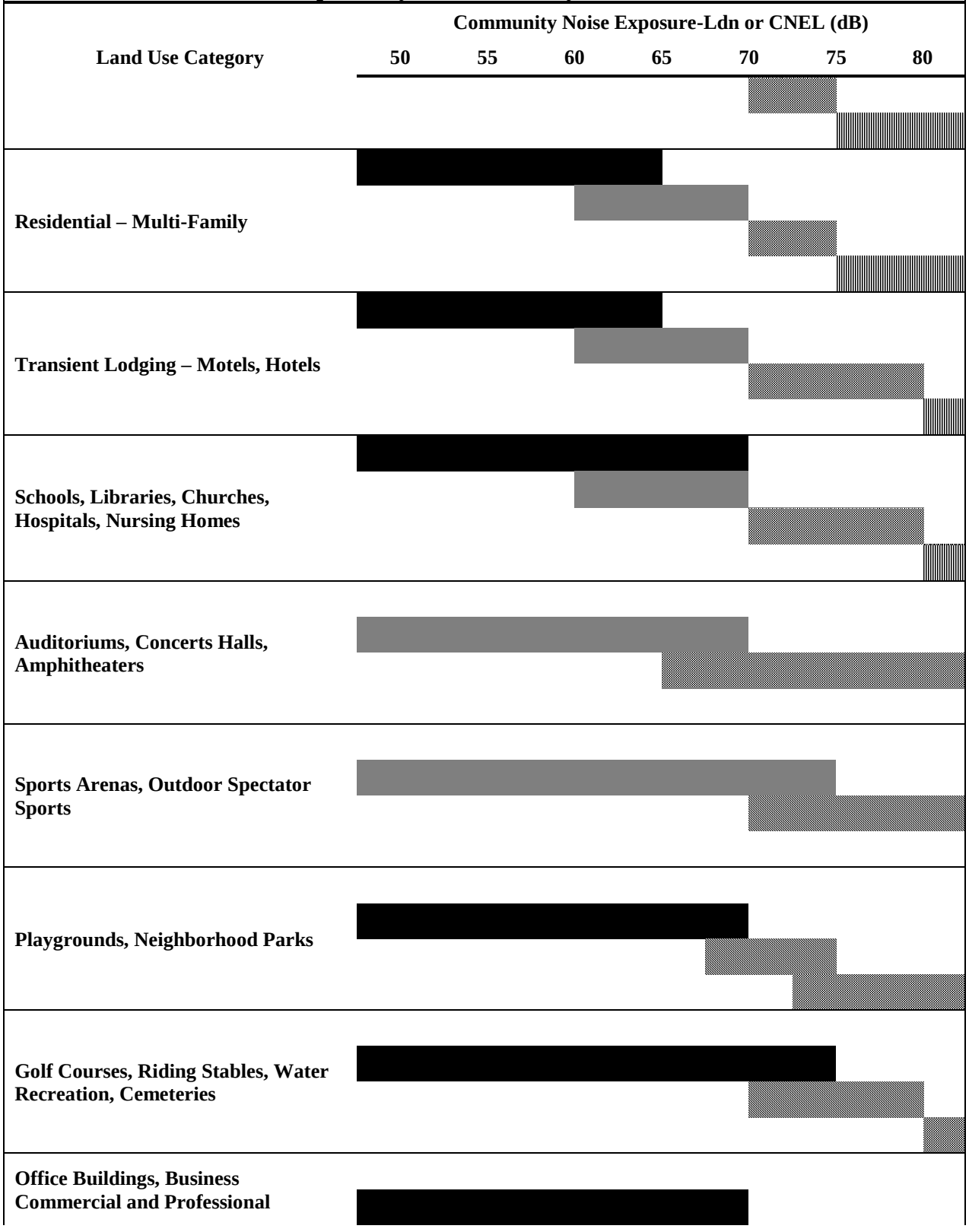

Table 3.12-1
Land Use Compatibility for Community Noise Environments [5]

Land Use Category	Community Noise Exposure-Ldn or CNEL (dB)						
	50	55	60	65	70	75	80
Industrial, Manufacturing, Utilities, Agriculture							

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable	New construction or development generally should not be undertaken.

REGULATORY SETTING

Federal Agencies & Regulations

There are no federal standards related to noise applicable to the Project. The Federal Noise Control Act of 1972 divided the powers between federal, state, and local governments, in which the primary federal responsibility is for noise source emission control. State and local governments are responsible for controlling the use of noise sources and determining the levels of noise to be permitted in the environment[6].

State Agencies & Regulations

California Noise Insulation Standards

[6] USEPA-EPA Identifies Noise Levels Affecting Health and Welfare, accessed: September 28, 2017 at: https://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.PDF

"The California Noise Insulation Standards found in the California Code of Regulations, Title 24, set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is DNL 45 dB in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than DNL 60 dB."[7]

California's Airport Noise Standards

"The State of California has the authority to establish regulations requiring airports to address aircraft noise impacts on land uses in their vicinities. The State of California's Airport Noise Standards, found in Title 21 of the California Code of Regulations, identify a noise exposure level of CNEL 65 dB as the noise impact boundary around airports. Within the noise impact boundary, airport proprietors are required to ensure that all land uses are compatible with the aircraft noise environment or the airport proprietor must secure a variance from the California Department of Transportation."[8]

California Department of Transportation (Caltrans)

"The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline."[9]

Local Policy & Regulations

At the local level, noise is addressed through the implementation of the County's General Plan policies, including noise and land use compatibility guidelines, and through compliance with the County Noise Ordinance. General Plan policies provide guidelines for determining whether a noise environment is appropriate for a proposed land use.

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies regarding the noise resource that relate to the proposed Project are listed below.

HS-8.2 Noise Impacted Areas - The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

HS-8.11 Peak Noise Generators - 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.

[7] 2014 TCAG RTP/SCS Draft EIR. Page 4.11-9.
[8] Ibid. 4.11-7 and 4.11-9.
[9] Op. Cit. 4.11-9.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e., berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

Traver Community Plan 2014 Update

In addition to Tulare County General Plan policies, the Traver Community Plan addresses noise-related issues and also contains numerous Noise Policies (see pages 70, 73, 74, 78, 92, 95 of the Community Plan).

IMPACT EVALUATION

Would the project:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Project Impact Analysis: ***Less Than Significant Impact***

Project construction would involve temporary, short-term noise sources including site preparation (for the lift station(s)), installation of the pipeline, improvements at the WWTP site, and site cleanup work is expected to last for approximately six (6) months. Construction-related short-term, temporary noise levels would be higher than existing ambient noise levels in the Project area, but would not occur after construction is completed.

The residences along the proposed pipeline alignment may result in a moderate ambient noise level during construction-related activities. However, as indicated in General Plan Policy **HS-8.18 Construction Noise – "**The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors." Construction-related activities noise would be short-term and temporary in nature. Also, operations-related noise would be imperceptible as sewer lines are gravity-fed, while the lift station(s)' electricity-powered pump(s) would be encased in cement vaults and undergrounded to further minimize potential noise. As such, noise levels are not anticipated to significantly impact sensitive receptors.

Operation and maintenance noise would be similar in character to existing noise in the area resulting from existing neighboring agricultural-related operations.

Complying with Tulare County General Plan Policies applicable to noise (particularly HS-8.11 Peak Noise Generators, HS-8.18 Construction Noise, and HS-8.19 Construction Noise Control), would result in a ***Less Than Significant Impact***.

Mitigation Measure(s): ***None Required***

.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the area of Tulare County encompassing the unincorporated community of Traver. The entire Community of Traver is bordered by agriculture lands to the west, north and south; this cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

Construction of the Project would not result in any long-term noise impacts with the implementation of Mitigation Measure NOI-3.12-1. Therefore, cumulative impacts would be ***Less Than Significant***.

Conclusion: ***Less Than Significant Impact***

As noted earlier, any Project-specific and cumulative impacts related to this Checklist Item would be ***Less Than Significant*** by complying with Tulare County General Plan Policies applicable to noise (particularly; HS-8.11 Peak Noise Generators, HS-8.18 Construction Noise, and HS-8.19 Construction Noise Control)

b) Exposure of persons to or generation of excessive groundborne vibration or ground borne noise levels?

Project Impact Analysis: ***Less Than Significant Impact***

There are no federal or state standards that address construction noise or vibration. Additionally, Tulare County does not have regulations that define acceptable levels of vibration. One reference suggesting vibration standards is the Federal Transit Administration (FTA) publication concerning noise and vibration impact assessment from transit activities. Although the FTA guidelines are to be applied to transit activities and construction, they may be reasonably applied to the assessment of the potential for annoyance or structural damage resulting from other activities. To prevent vibration annoyance in residences, a level of 80 VdB (vibration velocity level in dB) or less is suggested when there are fewer than 70 vibration events per day. A level of 100 VdB or less is suggested by the FTA guidelines to prevent damage to fragile buildings.

Table 3.12-2 describes the typical construction equipment vibration levels. While these construction-related activities would result in minor amounts of groundborne vibration, such groundborne noise or vibration would attenuate rapidly from the source and would not be

generally perceptible outside of the construction areas. In addition, there would not be any vibrational impacts from operation and maintenance activities.

As such, Project-specific impacts would be ***Less Than Significant***.

Table 3.12-2 Typical Construction Vibration Levels[10]	
Equipment	**VdB at 25 ft[2]**
Small Bulldozer	58
Jackhammer	79

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the area of Tulare County encompassing the unincorporated community of Traver. The entire Community of Traver is bordered by agriculture lands to the west, north and south; this cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

Operations of the Project would not result in any long-term vibration impacts. As such, cumulative impacts would be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted above, Project-specific and cumulative impacts related to this Checklist Item would be ***Less Than Significant.***

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Project Impact Analysis: ***Less Than Significant Impact***

The Project site is set in a rural area in Tulare County. The ambient noise environment in the vicinity of the Project site is dominated by agricultural uses, primarily tractors, by vehicles traveling along Merritt Drive, and by operations along the Union Pacific railroad line.

No noise would be generated from the operation of the pipeline, which would be buried underground. The pumps operating at the lift stations and the infrastructure improvements made to the existing WWTP would emit very low-level noise that would be barely detectible outside their respective enclosures and it is located approximately ¼ mile southeast of the nearest potential receptor (a single family residence). Therefore, the proposed Project would

[10] Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006. Pages 2-16 to 12-10.

not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Project-specific impacts would be ***Less Than Significant.***

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the area of Tulare County encompassing the unincorporated community of Traver. The entire Community of Traver is bordered by agriculture lands to the west, north and south; this cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

There are no other known or reasonable-foreseeable sources of noise that may occur in the near future. Cumulative impacts related to this category can only occur if there are Project-specific impacts. As noted earlier in the response to Item 3.12 c), any permanent increase to ambient noise levels would likely be imperceptible outside of the lift station(s) enclosure(s) (which would be undergrounded, enclosed within a concrete vault, and surrounded by and covered with dirt); as such, the increase in noise levels would not exceed Tulare County's standards. Therefore, cumulative impacts would be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As described earlier, there are no other known or reasonable-foreseeable sources of noise that may occur in the near future, and permanent increases to ambient noise levels would likely be imperceptible at any distance from the lift stations, and would not exceed Tulare County noise level thresholds. As a result, Project-specific and cumulative impacts would be ***Less Than Significant.***

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Project Impact Analysis: ***Less Than Significant Impact***

Temporary and short-term construction-related noise would occur as the Project components are constructed. No other temporary or periodic noise is anticipated.

An earlier discussion at Item 3.12 a) addresses noise generated by the construction-related activities of the Project concluding that the implementation of General Plan Policies HS-8.11 Peak Noise Generators, HS-8.18 Construction Noise, and HS-8.19 Construction Noise Control would reduce noise impacts to ***Less Than Significant***

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

There are no other projects that would significantly increase either temporary or short-term noise levels in the vicinity of the Project site. Unless significant temporary noise levels from multiple sources would occur at the same time, temporary and short-term construction-related noise would result in ***Less Than Significant Cumulative Impacts***

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As discussed earlier, both Project-specific and cumulative impacts related to this Checklist Item would be ***Less Than Significant*** by complying with Tulare County General Plan Policies applicable to Noise (particularly: HS-8.11 Peak Noise Generators, HS-8.18 Construction Noise, and HS-8.19 Construction Noise Control).

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 expose people residing or working in the project area to excessive noise levels?

Project Impact Analysis: ***No Impact***

The Project is not in the immediate vicinity of an airport land use plan. As noted earlier, the nearest airport is located Visalia, CA (approximately 15 miles southeast of Traver). Also, as the Project predominantly includes the construction of an underground wastewater pipeline, a new sewer line collection system within the community of Traver, lift station(s), and other WWTP appurtenances; there is no possibility that the Project would impact a public or public use airport or expose people residing or working in the Project area to excessive noise levels. Lastly, when completed, there would not be any employees on a full-time daily basis nor does the Project involve any residential uses. Therefore, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project site is not located within an airport land use plan boundary nor does it involve full-time employees or residential uses. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, the Project is not in the vicinity of an Airport Land Use Plan. As such, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Project Impact Analysis: ***No Impact***

As the Project site is not near any known operating private airstrips; potential exposure to private airstrip noise is non-existent. As noted earlier, the proposed Project predominantly includes the construction of an underground wastewater pipeline, a new sewer line collection system within the community of Traver, lift station(s), and other WWTP appurtenances; there is no possibility that the Project would impact a public or public use airport or expose people residing or working in the Project area to excessive noise levels. Therefore, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project is not located near a private airstrip, it predominantly includes the construction of an underground wastewater pipeline, a new sewer line collection system within the community of Traver, lift stations, and other WWTP appurtenances; there is no possibility that the Project would impact a public or public use airport or expose people residing or working in the Project area to excessive noise levels. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

DEFINITIONS/ACRONYMS

Definitions

"Noise is often described as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. Researchers have generally agreed that A-weighted sound pressure levels (sound levels) are well correlated with subjective reaction to noise. Variations in sound levels over time are represented by statistical descriptors, and by time-weighted composite noise metrics such as the Day/Night Average Level (Ldn)."[11] In addressing noise impacts, the following key terms are outlined and explained below:

Ambient Noise: "The total noise associated with a given environment and usually comprising sounds from many sources, both near and far."[12]

Attenuation: "Reduction in the level of sound resulting from absorption by the topography, the atmosphere, distance, barriers, and other factors."[13]

A-weighted decibel (dBA): "A unit of measurement for noise based on a frequency weighting system that approximates the frequency response of the human ear."[14]

Community Noise Equivalent Level (CNEL): "Used to characterize average sound levels over a 24-hour period, with weighting factors included for evening and nighttime sound levels. Leq values (equivalent sound levels measured over a 1-hour period - see below) for the evening period (7:00 p.m. to 10:00 p.m.) are increased by 5 dB, while Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) are increased by 10 dB. For a given set of sound measurements, the CNEL value will usually be about 1 dB higher than the Ldn value (see below). In practice, CNEL and Ldn are often used interchangeably."[15]

Decibel (dB): "A unit of measurement describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure (which is 20 micronewtons per square meter)."[16]

Day-Night Average Sound Level (Ldn): "Average sound exposure over a 24-hour period. Ldn values are calculated from hourly Leq values, with the Leq values for the nighttime period (10:00 p.m. to 7:00 a.m.) increased by 10 dB to reflect the greater disturbance potential from nighttime noises."[17]

Equivalent Sound Level (Leq): "The level of a steady-state sound that, in a stated time period and at a stated location, has the same sound energy as the time-varying sound (approximately

[11] Tulare County Association of Governments (TCAG), *2011 Regional Transportation Plan: Draft Subsequent EIR*. Page 150.
[12] Tulare County General Plan 2030 Update, Background Report, February 2010. Page 8-46.
[13] Ibid.
[14] Op. Cit.
[15] Op. Cit.
[16] Op. Cit.
[17] Op. Cit.

equal to the average sound level). The equivalent sound level measured over a 1-hour period is called the hourly Leq or Leq (h)."[18]

Lmax and Lmin: The maximum and minimum sound levels, respectively, recorded during a measurement period. When a sound meter is set to the "slow" response setting, as is typical for most community noise measurements, the Lmax and Lmin values are the maximum and minimum levels recorded typically for 1-second periods.[19]

Percentile-Exceeded Sound Level (Lx): "The sound level exceeded during a given percentage of a measurement period. Examples include L10, L50, and L90. L10 is the A-weighted sound level that is exceeded 10% of the measurement period, L50 is the level exceeded 50% of the period, and so on. L50 is the median sound level measured during the measurement period. L90, the sound level exceeded 90% of the time, excludes high localized sound levels produced by nearby sources such as single car passages or bird chirps. L90 is often used to represent the background sound level. L50 is also used to provide a less conservative assessment of the background sound level."[20]

Sensitive Receptors: "Sensitive receptors are defined to include residential areas, hospitals, convalescent homes and facilities, schools, and other similar land uses."[21]

Abbreviations and Acronyms

ALUC	Tulare County Airport Land Use Commission
CALUP	Tulare County Comprehensive Airport Land Use Plan
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted Decibel
DNL/Ldn	Day-Night Average Sound Level
Leq	Equivalent Sound Level
Lmax	Maximum Sound Level
Lmin	Minimum Sound Level
Lx/Ln	Percentile Exceeded Sound Level
VdB	Decibel, used to distinguish noise from vibration

[18] Op. Cit.
[19] Op. Cit. 8-47.
[20] Op. Cit.
[21] Op. Cit.

REFERENCES

CEQA Guidelines, Section 15126.2(a)

Tulare County General Plan 2030 Update

Tulare County General Plan 2030 Update, Background Report

Traver Community Plan 2014 Update.

Initial Study/Mitigated Negative Declaration (2014 SCH #2014091044), Appendix "F", *"Noise Study Report"* prepared by VRPA Technologies.

2014-2040 Tulare County Association of Governments, Regional Transportation Plan & Sustainable Communities Strategy, Draft Environmental Impact Report (SCH #2012081070) which can be accessed at: http://www.tularecog.org/rtp2014/

U.S. Department of Transportation, Federal Transit Administration, *Transit Noise & Vibration Impact Assessment*, May 2006, 2-16 to 12-10, which was accessed on September 29, 2017 at: https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/fta-noise-and-vibration-impact-assessment.

Chapter 3.13

Population and Housing

SUMMARY OF FINDINGS

The Project would result in ***Less Than Significant Impacts*** related to Population and Housing. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

CEQA Requirements for Evaluation of Impacts to Population and Housing

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Population and Housing. As required in CEQA Guidelines Section 15126, all phases of the Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a Project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the proposed project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the Project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision will have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

[1] CEQA Guidelines, Section 15126.2 (a)

The environmental setting provides a description of the Population and Housing in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report and/or Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA THRESHOLDS OF SIGNIFICANCE

The thresholds of significance for this section are established by the CEQA checklist item questions. The following are potential thresholds for significance:

- Induce Substantial Population Growth
- Displace Housing
- Displace People

ENVIRONMENTAL SETTING

"Tulare County, California is one of the largest counties in the San Joaquin Valley. Geographically it is situated about midway between San Francisco and Los Angeles, the two principal cities of the State. Tulare County is approximately 4,863 square miles, or 3,158,400 acres."[2]

Tulare County Regional Housing Needs Assessment Plan 2014-2023 (TCAG, June 2014)

State housing element law assigns the responsibility for preparing the Regional Housing Needs Assessment (RHNA) for the Tulare County region to the Tulare County Association of Governments (TCAG). The RHNA is updated prior to each housing element cycle. The current RHNA, adopted on June 30, 2014, covers a 9.75-year projection period (January 1, 2014 to September 30, 2023). The growth projections applied in the Housing Element Update are based upon growth projections developed by the State of California. The RHNA housing allocations for Tulare County were incorporated into **Table 3.13-1**. "A Regional Housing Needs Assessment Plan" provides a general measure of each local jurisdiction's responsibility in the provision of housing to meet those needs. The Tulare County Association of Governments (TCAG) was responsible for allocating the State's projections to each local jurisdiction within Tulare County including the County unincorporated area, which is reflected in this Housing Element.

"The Sustainable Communities and Climate Protection Act of 2008 (SB 375) was passed to support the State's climate action goals…to reduce greenhouse gas (GHG) emissions through coordinated transportation and land use planning. The bill mandates each of California's

[2] Tulare County Regional Blueprint, pages 4 to *5*

Metropolitan Planning Organizations (MPO) prepare a *sustainable communities strategy* as part of its regional transportation plan (RTP). The SCS contains land use, housing and transportation strategies that, if implemented, would allow the region to meet its GHG reduction targets. In the past, the RHNA was undertaken independently from the RTP. SB 375 requires that the RHNA and RTP/SCS processes be undertaken together to better integrate housing, land use, and transportation planning. In addition to the RHNA requirements, SB 375 requires that TCAG address the region's housing needs in the SCS of the RTP, to include sections on state housing goals (Government Code Section 65080(b)(2)(B)(vi)); identify areas within the region sufficient to house all the population of the region (including all economic segments of the population) over the course of the planning period for the RTP (out to 2040 for the 2040 RTP/SCS); and identify areas within the region sufficient to meet the regional housing needs"[3]

According to the Tulare County Regional Housing Needs Plan, the number of household in Tulare County's was 110,356 in 2000. In 2007 the number of households was 125,836. The 2014 household projection was 159,514. **Table 3.13-1** summarizes Tulare County's population between 1980 and 2010 according to the 1980-2010 U.S. Census.

Table 3.13-1
Tulare County Population

	1980	1990	2000	2008	2010
Tulare County's Population	245,738	311,921	368,021	435,254	442,179

Source: 1980, 1990, 2000 U.S. Census, State of California, Department of Finance, E-1 Population Estimates.

The RHNA housing results are summarized in **Table 3.13-2**. The Tulare County RHNA Plan recommends that the County provide land use and zoning for approximately 7081 units per year in the unincorporated portions of the County. The County administratively agreed to a housing share of 7,081 units (726 units per year over the 9.75-year RHNA planning period). The RTP allocates 30% of population to the County. The RHNA bases the housing needs assessment on this percentage.

[3] 2015 Housing Element. Page 3-21.

Table 3.13-2 Regional Housing Needs Assessment Plan
January 1, 2014 – September 30, 2023

	Income Category				
Jurisdiction	Very Low	Low	Moderate	Above Moderate	Total
Dinuba	211	163	121	470	965
Exeter	143	125	85	272	625
Farmersville	74	65	68	259	466
Lindsay	80	80	82	348	590
Porterville	623	576	566	1,431	3,196
Tulare	920	609	613	1,452	3,594
Visalia	2616	1,931	1,802	3,672	10,021
Woodlake	71	41	69	191	372
Unincorporated Area	1,477	1,065	1,169	3,370	7,081
Total Tulare County	6,215	4,655	4,575	11,465	26,910

Source: Table 1: "2014-2023 Final RHNA Allocations by Income Category," Final Regional Housing Needs Plan for Tulare County 2014-2023, page 19 (TCAG, 2014)

"Affordability problems occur when housing costs become so high in relation to income that households have to pay an excessive proportion of their income for housing, or are unable to afford any housing and are homeless. A household is considered to be overpaying (or cost burdened) if it spends more than 30 percent of its gross income on housing. Severe overpayment occurs when a household spends more than 50 percent of income on housing. Housing costs depend upon many variables, including the type, size, value and/or location of the housing units, the intended tenure of the unit (whether it is to be occupied by owners or renters), and the inclusion or exclusion of one or more utilities, services, property taxes, insurance, and maintenance."[4]

"Housing costs continue to rise significantly. The 2010 Census reports the median rent has increased 10.72% from $727 in 2000 to $805 in 2010. The median monthly owner costs for housing units with a mortgage have seen a minor decrease going from $1,518 to $1,471 which is a -3.09% decrease. The monthly owner costs for those housing units without a mortgage increased by less than 1%, going from $330 to $361."[5]

[4] 2015 Housing Element. Page 3-21.
[5] Ibid. Page 4-18.

REGULATORY SETTING

Federal Agencies & Regulations

U.S. Department of Housing and Urban Development (HUD)

"HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. HUD is working to strengthen the housing market to bolster the economy and protect consumers; meet the need for quality affordable rental homes: utilize housing as a platform for improving quality of life; build inclusive and sustainable communities free from discrimination; and transform the way HUD does business."[6]

State Agencies & Regulations

California Department of Housing and Community Development (HCD)

HCD's mission is to "[p]rovide leadership, policies and programs to preserve and expand safe and affordable housing opportunities and promote strong communities for all Californians."[7] "In 1977, the California Department of Housing and Community Development (HCD) adopted regulations under the California Administrative Code, known as the Housing Element Guidelines, which are to be followed by local governments in the preparation of local housing elements. AB 2853, enacted in 1980, further codified housing element requirements. Since that time, new amendments to State Housing Law have been enacted. Each of these amendments has been considered during development of this Housing Element."[8]

California Relocation Assistance Act

The State of California adopted the California Relocation Assistance Act (California Government Code Section 7260 et seq.) in 1970. This State law, which follows the federal Uniform Relocation Assistance and Real Property Acquisition Act, requires public agencies to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public programs and Projects. This State law calls for fair, uniform, and equitable treatment of all affected persons through the provision of relocation benefits and assistance to minimize the hardship of displacement on the affected persons.

Housing Element Law – Article 10.6 of the Government Code, Sections 65580–65589.8

The California legislature has declared the attainment of affordable housing and a suitable living environment for every Californian to be of vital importance. Attaining the state's housing goals requires efforts from all sectors, including the private sector, and all levels of government. Each

[6] HUD Website, http://portal.hud.gov/hudportal/HUD?src=/about/mission
[7] HCD website, http://www.hcd.ca.gov/mission.html
[8] Tulare County 20015 Housing Element Update, Adopted November 17, 2015. Page 1-3.

local government has power to facilitate the improvement and development of housing for all economic segments of the community accounting for economic, environmental, and fiscal factors as well as community goals and regional housing needs. One tool used by local governments to achieve these goals is the housing element of the general plan. The housing element identifies and analyzes existing and projected housing needs and presents goals, policies, quantified objectives, and programs to address those needs. Housing elements also provide implementation measures for these programs. Housing elements must be updated at least every five years. The current County of Tulare Housing Element was adopted by the County Board of Supervisors on November 17, 2015. HCD is subsequently on track to certify the Housing Element as complying with Housing Element Law in April, 2016.

Local Policy & Regulations

Tulare County 2014 Regional Housing Needs Assessment Plan

"It is the responsibility of the Tulare County Association of Governments (TCAG) to determine how to allocate to local jurisdictions the basic housing needs provided by the State Department of Housing and Community Development. The determination of household needs by income category is designed for the equitable distribution of households by income category within the region. The presumptive goal is to promote greater housing opportunities throughout the County. In 2014 the Regional Housing Needs Assessment Plan (RHNA) allocated a disproportionate amount of low and very low housing to the unincorporated area of Tulare County. In 2014, the RHNA plan provides a more equitable distribution of the regional housing needs allocation, as required by Section 65584 of the government Code, thereby providing greater affordable housing opportunities through the entire County including unincorporated areas as well as within the cities'."[9]

Tulare County Regional Blueprint 2009

This Blueprint includes the following preferred growth scenario principals:

- Increase densities county-wide by 25% over the status quo densities;
- Establish light rail between cities;
- Extend Highway 65 north to Fresno County;
- Expand transit throughout the county;
- Maintain urban separators around cities; and
- Growth will be directed toward incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are or will be provided.

[9] Ibid. 3-74.

Tulare County Housing Authority

"The Housing Authority of the County of Tulare (HATC) has been officially designated as the local public housing agency for the County of Tulare by the Board of Supervisors and was created pursuant to federal and state laws. …HATC is a unique hybrid: a public sector agency with private sector business practices. Their major source of income is the rents from residents. The HATC mission is "to provide affordable, well-maintained rental housing to qualified low- and very low-income families. Priority shall be given to working families, seniors and the disabled. Tenant self-sufficiency and responsibility shall be encouraged. Programs shall be self-supporting to the maximum extent feasible."

HATC provides rental assistance to very low and moderate-income families, seniors and the handicapped throughout the county. HATC offers many different programs, including the conventional public housing program, the housing choice voucher program (Section 8), the farm labor program for families with farm labor income, senior housing programs, and other programs. They also own or manage some individual subsidized rental complexes that do not fall under the previous categories, and can provide information about other affordable housing that is available in Tulare County. All programs are handicap accessible. Almost all of the complexes have 55-year recorded affordability covenants."[10]

2015-2030 Tulare County Housing Element Policies

- Policy 1.11 Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

- Policy 1.14 Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

- Policy 1.33 Encourage and support a balance between housing and agricultural needs.

- Policy 2.11 Encourage Federal and State governments to increase the level of funding for improvements or expansion of public infrastructure serving the unincorporated communities.

- Policy 2.12 Increase opportunities for technical assistance to public utility districts and community service districts and mutual water companies in an effort to educate and assist them in attaining the necessary public infrastructure.

- Policy 2.13 When land is purchased by the County in conjunction with installation of new public facilities, the County will endeavor to make any excess land available to housing agencies for development of affordable housing.

[10] Ibid. 5-12.

- Policy 2.14 Create and maintain a matrix of Infrastructure Development Priorities for Disadvantaged Unincorporated Communities in Tulare County through analysis and investigation of public infrastructure needs and deficits, pursuant to Action Program 9.

- Policy 2.21 Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

- Policy 2.24 Improvement requirements should reflect a balance between housing needs and the protection of public health and safety.

- Policy 2.25 The County shall encourage special districts, including community services districts and public utility districts to: 1. Institute impact fees and assessment districts to finance improvements, 2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and 3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems (GPU PFS 1.8 Funding for Service Providers).

- Policy 3.11 Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

- Policy 5.21 Administer and enforce the relevant portions of the Health and Safety Code.

- Action Program 9 – Housing Related Infrastructure Needs

  Provide vital information used for planning and development purposes, target expansion or repair of infrastructure and municipal services to areas with the most need and secure Federal and State funding for housing-related infrastructure. Provide technical assistance to PUDs, CSDs, and Mutual to fund infrastructure improvement and expansion, ensure safe and adequate water and liquid waste disposal, and have an equitable balance of fees between new and existing residents.

IMPACT EVALUATION

Would the Project:

a) Induce substantial 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)?

Project Impact Analysis: ***Less Than Significant Impact***

The proposed Project would result in infrastructure improvements to Traver's existing WWTP and associated sewer collection system. A new sewer main would be constructed and the existing treatment process would be improved. Pipelines would be sized as appropriate to serve existing development, to meet potential infill within Traver, and to accommodate the growth outlined and described in the adopted Traver Community Plan 2014 Update. As such, any impacts to this Checklist Item would result in a ***Less Than Significant Impact.***

Cumulative Impact Analysis: ***Less Than Significant Impact***

As noted earlier, designing and constructing a wastewater system capable of servicing the existing land uses and limited planned growth within Matheny Tract would result in a ***Less Than Significant Impact***.

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific and cumulative impacts related to this Checklist Item would result in a ***Less Than Significant Impact***.

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

Project Impact Analysis: ***No Impact***

The Project would result in the construction of a new sewer main and laterals along Road 44, Merritt Drive, and Burke Drive, a potential new lift station at the intersection of Merritt and Burke Drives, and improvements to the existing wastewater treatment plant. These improvements would occur within the existing right-of-way or on County-owned land within the existing footprint of the WWTP. As such, the Project would not displace any existing housing, thereby avoiding the need to construct replacement housing elsewhere. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

No existing housing would be displaced. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Project Impact Analysis: ***No Impact***

The proposed Project would result in the expansion of the existing wastewater collection system and improvements of the existing wastewater treatment plant process. The Project does not include the conversion of housing. Therefore, no people would be displaced. As a result, ***No Project-specific Impacts*** would occur that would displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The Project would not convert housing on-site or off-site. As a result, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

REFERENCES

CEQA Guidelines

1980, 1990, 2000 U.S. Census, State of California, Department of Finance, E-1 Population Estimates.

2010 U.S. Census, United States which can be accessed at:
http://www.census.gov/2010census/popmap/ipmtext.php?fl=06

California Department of Finance, May 1, 2017 E-1 Population Estimates for Cities, Counties, and the State – January 1, 2016 and 2017 Accessed September 25, 2017 at:
http://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/

HUD Website which can be accessed at:
http://portal.hud.gov/hudportal/HUD?src=/about/mission

HCD website which can be accessed at: http://www.hcd.ca.gov/mission.html

Tulare County 2030 General Plan, August 2012

Tulare County 2015 Housing Element Update, Adopted November 17, 2015; Certified by State of California Department of Housing and Community Development on December 9, 2015.

Final Tulare County 2014 Regional Housing Needs Assessment Plan, Tulare County Association of Governments, March 2014 which can be accessed at: http://www.tularecog.org/rtp2014/

Tulare County Regional Blueprint, TCAG, May 2009

Traver Community Plan 2014 Update

Chapter 3.14

Public Services

SUMMARY OF FINDINGS

The proposed Project would result in ***Less Than Significant Impacts*** related to Public Services. The impact analyses and determinations in this chapter are based upon information obtained from the References listed at the end of this chapter. As noted earlier, this document has been prepared using the Preferred Alternative as the proposed Project. As such, the following discussion refers to the "Preferred/Proposed Project" as "the Project". A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Public Services. As required in CEQA Guidelines Section 15126, all phases of the proposed Project would be considered as part of the potential environmental impact.

The environmental setting provides a description of the Public Services in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

CEQA THRESHOLDS OF SIGNIFICANCE

The thresholds of significance for this section are established by the CEQA checklist item questions. The following are potential thresholds for significance.

- Will the Project impact Fire Services?
- Will the Project impact Police Services?
- Will the Project impact Schools?
- Will the Project impact Parks?
- Will the Project impact Other Public Facilities?

ENVIRONMENTAL SETTING

Fire Protection

"The [former] California Department of Forestry and Fire Protection/Tulare County Fire Department (now CalFire/TCFD) serves 145,128 of Tulare County's population. As Table 7-6 of the General Plan Background document shows, dispatchers reported 14,022 responses in 2002, averaging 38.4 calls a day. Fire occurrence data generated by the Department indicate a direct relationship between high use areas of the county and fire occurrence. The population increase in the mountain areas have caused increased wildland urban interface problems as well. Structures are being built throughout wildland areas wherein vegetation fires can spread rapidly. Providing adequate fire protection to those structures has become a major undertaking."[1]

"..[T]he Tulare County Fire Department responded to 14,022 calls for service in 2002… [A] majority of the calls were for medical emergencies (52 percent) followed by fire calls (20 percent). The remaining calls ranged from dispatch incidents (8.1 percent) to assisting other agencies (7.3 percent) to public assistance (3.4 percent)."[2] Tulare County Fire Department maintains mutual aid agreements with neighboring fire agencies.

Fire protection services to the Project site are provided by the Tulare County Fire Department. The Tulare County Fire Station #2, Kings River Station, is located approximately five miles north of Traver in Kingsburg, CA. The Kings River Station has one (1) Fire Engine and it is staffed with one (1) Company officer on a forty eight (48) hour shift. This station has three (3) Company officers assigned to it, two (2) Fire Lieutenants and one (1) Fire Captain. Eight (8) Paid On-Call Fire Fighters are assigned to this station and they respond when called or toned out to an incident. Response time is approximately seven (7) minutes from this station to Traver.[3]

The Tulare County Fire Department uses an "attack" time protocol of 14 minutes to respond to 80 percent of the calls in rural areas. As the Project area is within the 14-minute response area; response times are achievable from the stations mentioned earlier (see **Table 3.14-1**).

[1] Tulare County General Plan Update 2030, Background Report, February 2010. Page 7-73.
[2] Ibid.7-74.
[3] Traver Community Plan Update Mitigated Negative Declaration (2014), Page 52.

Table 3.14-1 Fire Staffing and Response Time Standards			
	Demographics	**Staffing/Response Time**	**% of Calls**
Urban	> 1,000 people/sq. mi.	15 FF/9 min.	90
Suburban	500-100 people/sq. mi.	10 FF/10 min.	80
Rural	< 500 people/sq. mi.	6 FF/14 min.	80
Remote*	Travel Dist. > 8 min.	4 FF/no specific response time	90

**Upon assembling the necessary resources at the emergency scene, the fire department should have the capacity to safety commence an initial attach within 2 minutes, 90% of the time. (FF = Fire Fighters)*

Source: Tulare County 2030 General Plan

Police Protection

"In 2007, the Tulare County Sheriff's Department had 448 sworn officers serving its unincorporated population (145,128), and generates a level of service ratio of 3.2 officers per 1,000 residents. The ratio is above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff's Department also has 186 non-sworn clerical and support staff amounting to total Sheriff's Department staff personnel of 633 employees."[4]

"Law enforcement protection for the unincorporated county is divided into 22 areas with four stations… [T]he Porterville substation serves the largest number of areas with 10 patrols, followed by the headquarters in Visalia with six, and Cutler-Orosi and Pixley, each with three areas."[5]

"The nearest Sheriff's Substation to the Project site is located in Orosi (approximately 12.5 miles northeast). The substation provides patrol services 24-hours per day, 365 per year. The Substation runs a four shift operation which includes 23 deputies, four sergeants and one lieutenant. There are a minimum of three deputies and one sergeant in the field at all times. In addition to that general shift staffing the communities of Cutler, Orosi and New London/Traver have assigned Community Based Officers assigned specifically to those area. The substation is open for walk-ins from 8am to 5pm Monday thru Friday. After hours and weekends there is a phone provided outside the substation that calls directly into the dispatch center. Additional Sheriff resources are available as needed via dispatch from the main Sheriff's Office in Visalia, CA."[6]

According to the Tulare County Sheriff's Department 2014-2015 Annual Report, there were 592 allocated sworn officers serving the unincorporated population of 146,060 resulting in a service ratio of 2.45%. This ratio is still above the accepted standard of 2.0 officers per 1,000 residents set by the Federal Bureau of Investigation. The Sheriff's Department also has allocated 252 non-

[4] Tulare County General Plan Update 2030, Background Report, February 2010. Pages 7-71 and 7-72.
[5] Ibid. 7-71 and 7-72.
[6] Traver Community Plan Update Mitigated Negative Declaration (2014), Page 53.

sworn clerical and support staff amounting to the Sheriff's Department staff personnel of 844 total employees.[7]

Schools

A total of 48 school districts provide education throughout Tulare County. Of the 48 school districts, seven are unified districts providing educational services for kindergarten through 12th grade. The remaining 41 districts consist of 36 elementary school districts and four high school districts. Many districts only have one school."[8]

"Total enrollment in Tulare County public schools has increased from about 80,000 to 88,300 students during a nine-year span from 1993 to 2002. On average, the growth rate has remained steady with annual increases approximating two percent."[9]

The nearest school to the Project site is Traver Elementary School (K-8), which serves the Community. The School is located north of Merritt Drive approximately 1/3 mile northwest of the existing wastewater treatment plant. High School-aged children (grades 9-12) attend Kingsburg High School within the Kingsburg Joint High School District.

Parks

There are a number of Federal, State, and local parks within Tulare County, including 13 park and recreational facilities operated by the County of Tulare. There are no County owned/operated parks in Traver. Additional discussion of recreational facilities is provided in Chapter 3.15.

Library

"The Tulare County Public Library System is comprised of interdependent branches, grouped by services, geography and usage patterns to provide efficient and economical services to the residents of the county. At present, there are 14 regional libraries and one main branch."[10]

The nearest Tulare County Library Branch is the London Branch Library, located approximately three miles northeast of Traver.[11]

REGULATORY SETTING

Federal Agencies & Regulations

[7] Tulare County Sheriff's Department 2014-2015 Annual Report, page 6, accessed on September 28, 2017 and available at: http://www.tularecounty.ca.gov/sheriff/index.cfm/community/2014-2015-annual-report/
[8] Tulare County General Plan Update 2030, Background Report, February 2010. Pages 7-75 and 7-76.
[9] Ibid. 7-76.
[10] Op. Cit.
[11] Traver Community Plan Update Mitigated Negative Declaration (2014), Page 40.

No Federal Agencies or Regulations apply to the Project.

State Agencies & Regulations

No State Agencies or Regulations apply to the Project.

Local Policies & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to projects within Tulare County. General Plan policies that relate to the Project are listed as follows:

PFS-7.1 Fire Protection - The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.2 Fire Protection Standards - The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.3 Visible Signage for Roads and Buildings - The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

PFS-7.5 Fire Staffing and Response Time Standards - The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards.

PFS-7.6 Provision of Station Facilities and Equipment - The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.8 Law Enforcement Staffing Ratios - The County shall strive to achieve and maintain a staffing ratio of 3 sworn officers per 1,000 residents in unincorporated areas.

PFS-7.9 Sheriff Response Time - The County shall work with the Sheriff's Department to achieve and maintain a response time of:

1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

IMPACT EVALUATION

a) Will 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?

Project Impact Analysis: ***Less Than Significant Impact***

The Project is within the service area of the Tulare County Fire Department. The proposed underground wastewater pipelines do not require electricity or flammable materials which could ignite a fire. The potential for an unlikely fire to ignite at the existing wastewater treatment facility or at surface access points of pipelines would not pose a significant threat to nearby properties.

Impacts to fire protection services is generally driven by new residential or commercial development, which could also increase population. The proposed improvements to the existing wastewater treatment facility and installation of underground wastewater pipelines would not directly result in the creation of new residences or other facilities that could result in an influx of population. However, the Project may indirectly facilitate an increase in residential housing, commercial services and industrial facilities by providing additional wastewater capacity to the Community. The Traver Community Plan Update (2014) identified potential growth within the Urban Development Boundary (UDB). The environmental impacts of such growth was analyzed in the Traver Community Plan Update Mitigated Negative Declaration (State Clearinghouse #2014091044) which determined that impacts to fire protection services was less than significant (and new development would be subject to impact fees). The proposed Project is consistent with the Traver Community Plan and will provide adequate capacity to serve the areas within the UDB at full buildout of the Community Plan. Since the Project is being implemented to serve an existing need and to provide capacity for planned growth, there are no new impacts above and beyond what was already analyzed Community Plan Mitigated Negative Declaration. Therefore, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and Tulare County 2030 General Plan EIR.

The proposed underground wastewater pipelines do not require electricity or flammable materials which could ignite a fire. The potential for an unlikely fire to ignite at the existing wastewater treatment facility or at surface access points of pipelines would not pose a significant threat to nearby properties. Therefore, cumulative impacts would be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific and cumulative impacts related to this Checklist Item would be ***Less Than Significant***.

Police protection?

Project Impact Analysis: ***Less Than Significant Impact***

The County of Tulare's Sheriff's Office provides police protection services to the Project area, with or without the Project. Police services response is, and would remain, adequate to the Project and surrounding areas. The proposed improvements to the existing wastewater treatment facility and installation of underground wastewater pipelines would not require active police protection. While the County of Tulare's Sheriff's Office may be contacted for non-emergency situations (such as vandalism to facilities), it is not anticipated that such vandalism would occur.

Impacts to police protection services is generally driven by new residential or commercial development, which could also increase population. The proposed improvements to the existing wastewater treatment facility and installation of underground wastewater pipelines would not directly result in the creation of new residences or other facilities that could result in an influx of population. However, the Project may indirectly facilitate an increase in residential housing, commercial services and industrial facilities by providing additional wastewater capacity to the Community. The Traver Community Plan Update (2014) identified potential growth within the Urban Development Boundary (UDB). The environmental impacts of such growth was analyzed in the Traver Community Plan Update Mitigated Negative Declaration (State Clearinghouse #2014091044) which determined that impacts to police protection services was less than significant (and new development would be subject to impact fees). The proposed Project is consistent with the Traver Community Plan and will provide adequate capacity to serve the areas within the UDB at full buildout of the Community Plan. Since the Project is being implemented to serve an existing need and to provide capacity for planned growth, there are no new impacts above and beyond what was already analyzed Community Plan Mitigated Negative Declaration. Therefore, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed improvements to the existing wastewater treatment facility and installation of underground wastewater pipelines would not require active police protection. While the County of Tulare's Sheriff's Office may be contacted for non-emergency situations (such as vandalism to facilities), even if such vandalism did occur, it would likely be a non-emergency event. Therefore, ***Less Than Significant Cumulative*** impacts would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted previously, Project-specific and cumulative impacts related to this Checklist Item would be ***Less Than Significant***.

Schools? ***No Impact***

Project Impact Analysis: ***No Impact***

Impacts to schools is generally driven by new residential which could also increase population and an influx in school-aged children. The proposed improvements to the existing wastewater treatment facility and installation of underground wastewater pipelines would not directly result in the creation of new residences or other facilities that could result in an influx of population. However, the Project may indirectly facilitate an increase in residential housing, commercial services and industrial facilities by providing additional wastewater capacity to the Community. The Traver Community Plan Update (2014) identified potential growth within the Urban Development Boundary (UDB). The environmental impacts of such growth was analyzed in the Traver Community Plan Update Mitigated Negative Declaration (State Clearinghouse #2014091044) which determined that impacts to schools was less than significant (and new development would be subject to development impact fees). The proposed Project is consistent with the Traver Community Plan and will provide adequate capacity to serve the areas within the UDB at full buildout of the Community Plan. Since the Project is being implemented to serve an existing need and to provide capacity for planned growth, there are no new impacts above and beyond what was already analyzed Community Plan Mitigated Negative Declaration.

As such, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project is consistent with the growth projections in the Traver Community Plan Update (2014) and will not cause growth that is not already planned for. Therefore, the Project would not impact schools. As such, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, the Project would not result in population growth that is not already planned for. Therefore, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

Parks?

Project Impact Analysis: ***No Impact***

As discussed in Section 3.15 – Recreation, the Project would not impact parks. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

As discussed in Section 3.15 – Recreation, the Project would not impact parks. Therefore, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, and addressed in Section 3.15 - Recreation, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

Other Public Facilities?

Project Impact Analysis: ***No Impact***

Impacts other public facilities is generally driven by new residential or commercial development, which could also increase population. The proposed improvements to the existing wastewater treatment facility and installation of underground wastewater pipelines would not directly result in the creation of new residences or other facilities that could result in an influx of population. However, the Project may indirectly facilitate an increase in residential housing, commercial services and industrial facilities by providing additional wastewater capacity to the Community. The Traver Community Plan Update (2014) identified potential growth within the Urban Development Boundary (UDB). The environmental impacts of such growth was analyzed in the Traver Community Plan Update Mitigated Negative Declaration (State Clearinghouse #2014091044) which determined that impacts to other public facilities was less than significant (and new development would be subject to impact fees). The proposed Project is consistent with the Traver Community Plan and will provide adequate capacity to serve the areas within the UDB at full buildout of the Community Plan. Since the Project is being implemented to serve an existing need and to provide capacity for planned growth, there are no new impacts above and beyond what was already analyzed Community Plan Mitigated Negative Declaration. Therefore, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan Background Report, and/or Tulare County 2030 General Plan EIR.

The proposed Project is consistent with the growth projections in the Traver Community Plan Update (2014) and will not cause growth that is not already planned for. Therefore, the Project would not cause a population increase such that other public facilities would be needed. Therefore, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, the Project would not cause a population increase such that other public facilities would be needed. As such, there would be ***No Project-specific or Cumulative Impacts***.

REFERENCES

Tulare County General Plan Update 2030, Background Report, February 2010

Tulare County Fire Department Web Site: http://www.tularecounty.ca.gov/fire/

Tulare County Sheriff's Department 2014-2015 Annual Report, page 6, accessed on September 28, 2017 and available at: http://www.tularecounty.ca.gov/sheriff/index.cfm/community/2014-2015-annual-report/

Tulare County Parks Department Web Site which can be accessed at: http://www.co.tulare.ca.us/government/parks/default.asp

Tulare County Recirculated Draft Environmental Impact Report (SCH # 2006041162).

Traver Community Plan Update (2014)

Traver Community Plan Update (2014) Mitigated Negative Declaration (State Clearinghouse #2014091044)

Chapter 3.15

Recreation

SUMMARY OF FINDINGS

The Preferred/Proposed Project would result in ***No Impacts*** related to Recreation. No mitigation measures would be required. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Recreation. As required in CEQA Guidelines Section 15126, all phases of the proposed Project would be considered as part of the potential environmental impact.

As noted in Section 15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1] The environmental setting provides a description of the Recreational Resources in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory

[1] CEQA Guidelines, Section 15126.2 (a)

policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or Tulare County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance:

- Increase use of existing recreational facilities
- Include or require additional recreational facilities

ENVIRONMENTAL SETTING

"Tulare County contains several county, state, and federal parks. Aside from parks in the county, there are many open space areas as well. This section will highlight these various parks and open space areas and identify recreational opportunities within them."[2] In addition to the 13 parks and recreation facilities that are owned and operated by Tulare County, there are State Parks and Forests, National Parks and National Forests, and trails and recreational areas. However, none of these facilities are within the immediate vicinity of the Project.

Recreational Facilities

Schools and Parks

The only improved recreational facilities currently accessible to the general public and the community are the Traver Elementary grounds when they are not in use by students or during school hours. The nearest County-owned/operated parks are the Ledbetter Park in the unincorporated community of Cutler approximately 12.5 miles northeast of Traver and the Kings River Natur Preserve located two miles east of State Route 99 at Road 28.

Table 3.15-1 provides a summary of federal recreation areas within Tulare County, while Table 3.15-2 lists County of Tulare recreational areas.

Federal Recreation Areas

Table 3.15-1 provides a summary of federal recreation areas within Tulare County.

[2] General Plan Background Report. Page 4-1.

Lake Kaweah

"Lake Kaweah was formed after the construction of the Terminus Dam on the Kaweah River in 1962. The lake offers many recreational opportunities including fishing, camping, and boating. Lake Kaweah is located 20 miles east of Visalia on Highway 198 and was constructed by the U.S. Army Corps of Engineers for flood control and water conservation purposes. The lake has a maximum capacity to store 143,000 acre-feet of water. There are a total of 80 campsites at the lake's Horse Creek Campground, which contains toilets, showers and a playground. Campfire programs are also available. Aside from camping, boat ramps are provided at the Lemon Hill and Kaweah Recreation Areas. Both Kaweah and Horse Creek provide picnic areas, barbecue grills and piped water. Swimming is allowed in designated areas. In addition, there is a one-mile hiking trail between Slick Rock and Cobble Knoll, which is ideal for bird watching."[3]

Lake Success

"Lake Success was formed by construction of the Success Dam on the Tule River in 1961. The lake offers many recreational activities including fishing, boating, waterskiing, and picnicking. The U.S. Army Corps of Engineers (USACOE) constructed this reservoir for both flood control and irrigation purposes. The lake has a capacity of 85,000 acre-feet of water. The lake is located eight miles east of Porterville in the Sierra Nevada foothills area. Recreational opportunities include ranger programs, camping at the Tule campground, which provides 104 sites, boating, fishing, picnic sites, playgrounds and a softball field. Seasonal hunting is also permitted in the 1,400-acre Wildlife Management Area."[4]

National Parks and National Forests

"Most of the recreational opportunities in the county are located in Sequoia National Forest, Giant Sequoia National Monument, and in Sequoia and Kings Canyon National Parks (SEKI). Although these parks span adjacent counties, they make a significant contribution to the recreational opportunities that Tulare County has to offer."[5]

Table 3.15-1
National Park and Forest Facilities

Recreation Area	Location	Camping Sites
Sequoia National Forest		
Gray's Meadow	5 miles West of Independence on Onion Valley Road.	52 tent/RV sites
Oak Creek	4 ½ miles NW of Independence off Highway 395.	21 tent/RV sites
Onion Valley	14 miles West of Independence on Onion Valley Road.	29 tent/RV sites
Stony Creek	14 miles SE of Grant Grove on Generals Highway.	49 tent/RV sites
Whitney Portal	13 miles West of Lone Pine on Whitney Portal Road.	43 tent/RV sites

[3] Ibid.
[4] General Plan Background Report, page 4-7.
[5] Ibid.

Table 3.15-1 National Park and Forest Facilities		
Recreation Area	**Location**	**Camping Sites**
Total		**194 sites**
Kings Canyon and Sequoia National Park		
Atwell Mill	Sequoia, 19 miles from Highway 198 on Mineral King Road.	21 tent sites
Azalea	Kings Canyon, 3 ½ miles from Kings Canyon Park entrance.	110 tent sites
Buckeye Flat	Sequoia, 11 miles South of Giant Forest of Generals Highway.	28 tent sites
Canyon View	Cedar Grove in Kings Canyon	23 tent sites
Cold Springs	Sequoia, Mineral King Area.	25 tent sites
Crystal Springs	Kings Canyon, ½ mile North of Grant Grove.	67 tent/RV sites
Dorst Creek	Sequoia, 9 miles North of Lodgepole off Generals Highway.	210 tent/RV sites
Lodgepole	Sequoia, 4 miles NE of Cedar Grove.	203 tent/RV sites
Moraine	Kings Canyon, 1 mile East of Cedar Grove.	120 tent/RV sites
Potwisha	Sequoia, 4 miles NE of Ash Mountain entrance off Generals Highway.	42 tent/RV sites
Sentinel	In the Cedar Grove area near the Kings River.	82 tent sites
Sheep Creek	Kings Canyon, 1/2-mile West of Cedar Grove.	111 tent/RV sites
South Fork	Sequoia, 13 miles on South Fork from Highway 198.	10 tent sites
Sunset	In the Grant Grove area 3 miles from Kings Canyon park entrance.	157 tent sites
Total		**1,209 sites**

Source: Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

Sequoia National Forest

"Sequoia National Forest takes its name from the Giant Sequoia, which is the world's largest tree. There are more than 30 groves of sequoias in the lower slopes of the park. The park includes over 1,500 miles of maintained roads, 1,000 miles of abandoned roads and 850 miles of trails for hikers, off-highway vehicle users and horseback riders. The Pacific Crest Trail connecting Canada and Mexico crosses a portion of the forest, 78 miles of the total 2,600 miles of the entire trail. It is estimated that 10 to 13 million people visit the forest each year."[6]

Giant Sequoia National Monument

"The Giant Sequoia National Monument was created in 2000 by President Clinton in an effort to preserve 34 groves of ancient sequoias located in the Sequoia National Forest. The Monument includes a total of 327,769 acres of federal land, and provides various recreational opportunities, including camping, picnicking, fishing, and whitewater rafting. According to the Giant Sequoia National Monument Management Plan EIS, the Monument includes a total of 21 family campgrounds with 502 campsites and seven group campgrounds. In addition, there are

[6] Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County General Plan Background Report. Page 4-9.

approximately 160 miles of system trails, including 12 miles of the Summit National Recreation Trail."[7]

Sequoia and Kings Canyon National Parks (SEKI)

"The U.S. Congress created the Kings Canyon National Park in 1940 and Sequoia National Park in 1890. Because they share many miles of common boundaries, they are managed as one park. The extreme large elevation ranges in the parks (from 1,500 to 14,491 feet above sea level), provide for a wide range of vegetative and wildlife habitats. This is witnessed from exploring Mt. Whitney, which rises to an elevation of 14,491 feet, and is the tallest mountain in the contiguous United States. During the summer months, park rangers lead walks through the parks, and tours of Crystal and Boyden Caves. During the winter, visitors explore the higher elevations of the parks via cross country skis or snowshoes, or hike the trails in the foothills. The SEKI also contains visitor lodges, the majority of which are open year round. According to the National Parks Conservation Association, a combined total of approximately 1.4 million people visit the two parks on an annual basis."[8]

State Parks and Forests

Colonel Allensworth State Park

"The only State Park in Tulare County is Colonel Allensworth State Historic Park discussed in Section 9.3. The park contains a museum and a visitor center addressing the town's history, as well as camping facilities. Allensworth is the only California town to be founded, financed and governed by African Americans. The small farming community was founded in 1908 by Colonel Allen Allensworth and a group of others dedicated to improving the economic and social status of African Americans. Uncontrollable circumstances, including a drop in the area's water table, resulted in the town's demise. With continuing restoration and special events, the town is coming back to life as a state historic park. The park's visitor center features a film about the site. A yearly rededication ceremony reaffirms the vision of its pioneers."[9]

Mountain Home State Forest

"The Mountain Home State Forest is a State Forest managed by the California Department of Forestry and Fire Protection (CDF). The Forest consists of 4,807 acres of parkland containing a number of Giant Sequoias, and is located just east of Porterville. The Forest is a Demonstration Forest, which is considered timberland that is managed for forestry education, research, and recreation. Fishing ponds, hiking trails, and campsites are some of the amenities that can be found in the Forest."[10]

[7] Ibid.
[8] Ibid.
[9] Tulare County 203 General Plan Re-circulated RDEIR. Page 4-3.
[10] Ibid. Page 4-7.

Other Recreational Facilities

Other recreational resources available in Tulare County include portions of the Pacific Crest Trail, South Sierra Wilderness Area, Dome Land Wilderness Area, Golden Trout Wilderness Area, International Agri-Center, and the Tulare County Fairgrounds.[11]

In addition, there are several nature preserves open to the public which are owned and operated by non-profit organizations, including the Kaweah Oaks Preserve and Dry Creek- Homer Ranch preserves, both owned and operated by Sequoia Riverlands Trust.

Incorporated cities in the County also have a number of recreational facilities including neighborhood parks, play lots, pocket parks and other recreation facilities."[12]

County of Tulare Parks

Table 3.15-2
County of Tulare Recreational Areas

ID	Recreation Area	Location	Acres	Type of Use/Features
County				
1	Alpaugh Park	Located in Alpaugh on Road 40.	3	Reservations for picnic areas are taken. No entrance fee.
2	Balch Park Campgrounds	20 miles NE of Springville in the Sierras.	160	71 Campsites. No reservations taken; first come first serve basis. Entrance fee for vehicles.
3	Bartlett Park	8 miles east of Porterville on North Drive.	127.5	Reservations for picnic areas are taken. Entrance fee for vehicles.
4	Camp COTYAC	Near Ponderosa in Eastern Tulare County.	8	County of Tulare Youth Adventure Camp (Camp COTYAC). Cabins, lodge with kitchen, restrooms and showers.
5	Cutler Park	5 miles east of Visalia on Highway 216 to Ivanhoe.	50	Reservations for picnic areas are taken. Entrance fee for vehicles.
6	Elk Bayou Park	6 miles SE of Tulare on Avenue 200.	60	Reservations for picnic areas are taken. No fee for day use.
7	Kings River Nature Preserve	2 miles east of Highway 99 on Road 28	85	This park is only for school environmental programs.
8	Ledbetter Park	1 mile northwest of Cutler on Road 124/Hwy 63	11	Reservations for picnic areas are taken. No fee.
9	Mooney Grove Park	2 Miles south of Caldwell Avenue on Mooney Blvd. In	143	Reservations for picnic areas are taken. Paddle boats, playground, and baseball diamonds. Home of the End Trail statue. One of the largest oak woodlands in Tulare

[11] Ibid. Page 3.9-32.
[12] Op. Cit. 3.9-29.

Table 3.15-2 County of Tulare Recreational Areas				
ID	**Recreation Area**	**Location**	**Acres**	**Type of Use/Features**
		South Visalia.		County. Location of the Agriculture and Farm Labor Museum.
10	Pixley Park	1 mile NE of Pixley on Road 124.	22	Reservations for picnic areas are taken. No fee.
11	Tulare County Museum	In Mooney Grove Park, South Visalia.	8.5	Free admission with park fee. Museum is opened Thursday thru Monday (closed Tuesday and Wednesday).
12	Woodville Park	Located in Avenue 166 in Woodville.	10	Reservations for picnic areas are taken. Day use no entrance fee.
13	West Main Street Park	2 blocks west of County Courthouse on Main Street in Downtown Visalia.	5	Day use no entrance fee.
Total Acres				**693**

Source: Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

Existing Site Conditions

The Project is located within the unincorporated portion of central Tulare County in California's Central Valley, predominantly surrounded by historically disturbed agricultural land.

As indicated in the Traver Community Plan, the community has a population of 713 (California Department of Finance). During the decade between 2000 and 2010, the number of housing units in Traver increased from 182 to 184.[13]

The Community of Traver consists mainly of existing single-family homes fronting on paved County road rights-of-way with dirt shoulders (i.e., without curb and gutter). Similarly, surrounding areas are served by semi-rural paved, two-lane roads with rough-graded, unpaved, gravel shoulders. All proposed pipelines would be installed within existing County rights-of-way. Occasionally, pipelines would require trenching across paved roadways to connect to other components of the pipeline infrastructure. Land uses in the vicinity are primarily residential, or related to agricultural production and associated uses.

REGULATORY SETTING

Federal Agencies & Regulations - None that apply to the Project

State Agencies & Regulations- None that apply to the Project

[13] Tulare County Traver Community Plan. 2014. Page 49.

Local Policy & Regulations- Although the County has numerous General Plan policies that apply to parks and recreational activities/opportunities, the nature of the Project results in no policies that apply to the Project.

IMPACT EVALUATION

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?

Project Impact Analysis: ***No Impact***

Typically, the increased use of parks and recreational facilities result from the addition of new housing and the accompanying growth of persons. No new housing is proposed as part of the proposed Project. Therefore, ***No Impact*** would occur.

The proposed Project is being recommended to provide a more reliable wastewater treatment plant within the unincorporated Community of Traver. The proposed wastewater pipelines would be adequately sized to serve the community's existing needs and are not intended to provide additional capacity for substantial amounts of future development not addressed in the Traver Community Plan. Typically, the increased use of parks and recreational facilities result from the addition of new housing and the accompanying growth of population. However, no new housing is proposed as part of the Project. Therefore, ***No Project-specific Impact*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

The Project does not include housing or the accompanying population growth. As such, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

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

Project Impact Analysis: ***No Impact***

The Project does not include new recreational facilities or the expansion of recreational facilities. As such, ***No Project-specific Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project does not include new recreational facilities or the expansion of recreational facilities. As such***, No Cumulative Impacts*** would occur.

Conclusion: ***No Impact***

As noted earlier, ***No Project-specific or Cumulative Impacts*** related to this Checklist Item would occur.

REFERENCES

Tulare County General Plan 2030 Update, Background Report, February 2010

Tulare County Resource Management Agency, Parks and Recreation Branch, 2008

Tulare County Resource Management Agency, Traver Community Plan. 2014.

Tulare County Recirculated Draft Environmental Impact Report (SCH # 2006041162).

Tulare County Resource Management Agency, Parks and Recreation Branch, 2008; Automobile Club of Southern California, Tulare County Map.

National Park Service Overview, Updated January 1, 2017, which was accessed on September 24, 2017 at: https://www.nps.gov/aboutus/news/upload/NPS-Overview-01-13-17.pdf

California Department of Parks and Recreation, "About Us", which was accessed on September 24, 2017 at: http://www.parks.ca.gov/?page_id=91

California Department of Finance.

Chapter 3.16

Transportation/Traffic

SUMMARY OF FINDINGS

The proposed Project would result in ***Less Than Significant Impact*** related to Transportation/Traffic. As noted earlier, this document has been prepared using the Preferred Alternative as the proposed Project. As such, the following discussion refers to the "Preferred/Proposed Project" as "the Project". Also, the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration (SCH# 2014091044), Appendix "G", *"Traver Community Plan Traffic Impact Assessment and Circulation Element"* prepared by VRPA Technologies is incorporated by reference. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to transportation and traffic. As required in Section 15126, all phases of the proposed Project would be considered as part of the potential environmental impact.

As noted in Guidelines Section 15126.2 a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."

The environmental setting provides a description of the Transportation and Traffic in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, the Tulare County General Plan Background Report and/or the Tulare County General Plan Revised DEIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the proposed Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

The thresholds of significance for this section are established by the CEQA Checklist item questions. The following are potential thresholds for significance:

- Result in a Level of Service (LOS) less than "D"
- Unsafe roadway/circulation design
- Impact Air Traffic
- Dangerous Site Design
- Inadequate Access
- Need for additional Public Transit
- Need for additional Bike Facilities
- Need for additional Pedestrian Facilities

ENVIRONMENTAL SETTING

The Project would result in a process upgrade at the existing wastewater treatment facility and the construction of wastewater collection laterals from homes and businesses within the Community of Traver. These collection lines would then intertie to a main line that would deliver the wastewater to the existing wastewater treatment ponds located approximately 0.4 miles east of the Community. Construction-related activities would likely cause some interruption in the free-flow of traffic on roadways within the Community; however, these disruptions would likely only involve periodic/short term closures of roadway segments or minor detours until construction is completed. The operations of the Project would have no effects to traffic flow or traffic volumes.

"The purpose of the highway, streets and roads section is to identify the existing regional circulation system and determine both feasible short-term and long-range improvements. Tulare County's planned circulation system consists of an extensive network of regional streets and roads, local streets and State Highways. The system is designed to provide an adequate [Level of Service] LOS that satisfies the transportation needs of County residents. However, Tulare County has experienced a large increase in population and is beginning to outgrow portions of the circulation system. The need for major improvements to the State Highways, streets and roads network is an important issue.

The existing State Highway system was completed in the 1950's and 60's. The average design life of a State Highway is approximately 20 years and many Tulare County's highways were

constructed 50 years ago. The Agricultural and commercial industry continue to utilize the circulation system to get products to market. With industry intensification and other development, many facilities are beginning to show structural fatigue (e.g., surface cracks, potholes, and broken pavement)."[1]

"Caltrans and the Tulare County region will be placing more emphasis on corridors as an important element of the transportation system. The analysis of the regional circulation system in this [2014-2040 Regional Transportation Plan & Sustainable Communities Strategy] 2014 RTP emphasizes people movement through transportation corridors. Caltrans defines a corridor as a "broad geographic area that includes various modes of transportation, local roads and State Highways." Corridors may be defined as terms of the number of people or tonnage of freight moved in any particular direction, regardless of the facility.

Caltrans, [Regional Transportation Planning Agencies] RTPAs, local transit agencies and local governments have developed the analysis of corridor needs. Caltrans developed a System Management Plan to reflect individual corridors and the relationship to each other. The emphasis on corridor planning will require open communication between the District and locals in order to develop a common database and consistent planning practices.

The 2014 RTP contains goals aimed at protecting and enhancing various corridors. The objective provides guidance toward coordination of local planning processes along the corridors. The policy supports limitation of direct access along regionally significant corridors. The data to be analyzed will include volume, length, type, destination, and modal split of person trips. Analysis of this data will help TCAG determine transportation corridor conditions and needs. In Tulare County major travel corridors often closely mirror regionally significant roadways. Figures 3-18 and 3-19 [in the RTP] identify major corridors identified by Caltrans and [Tulare County Association of Governments] TCAG:

- SR- 99 (including UP rail line);
- SR-43 (including BNSF rail line);
- City of Visalia to the City of Tulare including Mooney Boulevard, Demaree/Blackstone/Hillman, Akers Road and transit links;
- SR-65 from SR-198 to the City of Lindsay;
- City of Lindsay to City of Porterville, including SR-65 and Orange Belt Dr.;
- SR-65 from the City of Porterville to the Kern County line;
- SR-198/Sequoia National Park/Exeter/Hanford;
- SR-190/Road 152 from the Kings County line to the City of Porterville; and
- SR-137 from the Kings County line to the City of Lindsay."[2]

"Tulare County has interregional connections along the SR 198 corridor with Kings County, SR 99 with Kern and Fresno County, and SR 65 with Kern County and Ave 416 with Fresno County. The main corridors are currently running at capacity or near capacity. TCAG has coordinated with

[1] *2014-2040 Regional Transportation Plan &Sustainable Communities Strategy, Tulare County Association of Governments (TCAG), June 2014. Page 3-54.*
[2] Ibid. 3-54 and 3-55.

surrounding counties to improve these significant corridors. By way of Proposition 1B funds, and other local and state funds, the SR-198 corridor has been widened between the cities of Visalia and Hanford. Segments of SR-99 have begun widening at the north end of Tulare County. TCAG will continue to move forward on these major projects, in close partnership with Caltrans and neighboring jurisdictions."[3]

As indicated in the 2014 RTP, capacity and level of service are two significant criteria used to measure the ability of a roadway to handle volume and the speed of volume flow; respectively. Following are discussion excerpted from the 2014 RTP:

"Capacity

According to the 2010 Highway Capacity Manual (HCM), capacity is defined as "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic and control conditions, usually expressed as vehicles per hour or persons per hour." The ratio of the roadway volume to its capacity, V/C, can be useful in determining the preliminary Level of Service (LOS) of a roadway.

*V*olume = Actual number of vehicles.
*C*apacity = Maximum number of vehicles on a particular segment of roadway during a specific time frame.

Level of Service

LOS is categorized by two parameters, uninterrupted flow and interrupted flow. Uninterrupted flow facilities have no fixed elements, such as traffic signals, that cause interruptions in traffic flow (e.g., freeways, highways, and controlled access, some rural roads). Interrupted flow facilities have fixed elements that cause an interruption in the flow of traffic such as stop signs and signalized intersections. The definitions and measurements used for determining level of service in interrupted and uninterrupted conditions are shown below:

Uninterrupted Traffic Flow Facilities

LOS A: Describes free-flow operations. Free-Flow Speed (FFS) prevails on the freeway, and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.

LOS B: Represents reasonably free-flow operations, and FFS on the freeway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.

[3] Op. Cit. 3-55.

LOS C: Provides for flow with speeds near the FFS of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

LOS D: At this level speeds begin to decline with increasing flows, with density increasing more quickly. Freedom to maneuver within the traffic stream is seriously limited and drivers experience reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.

LOS E: Describes operation at capacity. Operations on the freeway at this level are highly volatile because there are virtually no useable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering from a ramp or changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown and substantial queuing. The physical and psychological comfort afforded to drivers is poor.

LOS F: Describes breakdown, or unstable flow. Such conditions exist within queues forming behind bottlenecks. Breakdowns occur for a number of reasons:

Traffic incidents can temporarily reduce the capacity of a short segment, so that the number of vehicles arriving at a point is greater than the number of vehicles that can move through it.

Points of recurring congestion, such as merge or weaving segments and lane drops, experience very high demand in which the number of vehicles arriving is greater than the number of vehicles that can be discharged.

In analyses using forecast volumes, the projected flow rate can exceed the estimated capacity of a given location.

Interrupted Traffic Flow Facilities

LOS A: Describes operations with a control delay of 10 s/veh or less and a volume-to- capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B: Describes operations with a control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A, with reasonably unimpeded travel between intersections.

LOS C: Describes operations with control delay between 20 and 35 s/veh and a volume-to- capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e.one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. May be longer queues and operations between locations may be more restricted.

LOS D: Describes operations with control delay between 35 and 55 s/veh and a volume-to- capacity ratio no greater than 1.0. Travel speeds are about 40 percent below free flow speeds. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E: Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to- capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent. Average travel speed is one-third of free flow speeds. The facility is generally at full capacity.

LOS F: Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue. Extremely slow speeds with average delay of 80 seconds or more. Frequent stop and go conditions.

Caltrans policy defines LOS D as an acceptable operating condition when planning for future state facilities in urbanized areas. TCAG monitors traffic levels of service on the regional roads. An LOS of D or better is the goal on urban roads, and C on rural roads."[4]

"***Public Transit***

An inexpensive and clean alternative to adding additional lanes to highways, streets and roads is to provide mass transit systems. Transit service in the County is currently provided by both local agencies and contracted private operators. Mass transportation is an economical mode of transportation. In Tulare County, all public mass transportation is provided by fixed route buses and dial-a-ride services that meet all reasonable needs in the region. Tulare County is not directly serviced by passenger rail facilities although it is accessible to Hanford's Amtrak station by bus. Furthermore, inter-agency transfer points are becoming part of Tulare County's overall circulation system, in an effort to coordinate transit systems between adjacent agencies. TCAG will be leading the development of the first-ever Tulare County Regional Long Range Transit Plan. The plan will begin in late 2014."[5]

"Mass transportation provides transportation to large numbers of people to designated destinations by bus or train. In Tulare County, buses are the primary mode of public transportation. Amtrak, California's only operating interregional passenger rail service, doesn't directly serve Tulare

[4] Op. Cit. 3-1 thru 3-4.
[5] Op. Cit. 3-52.

County. The closest Amtrak stations are in the Cities of Hanford and Corcoran in Kings County. However, Amtrak does coordinate with Visalia Transit to provide a feeder bus linking Visalia from the city's transit center with the Hanford Station in Kings County. Public transportation in Tulare County also takes the form of shared-ride taxis, carpools and vanpools; dial-a-ride and specialized handicapped accessible services. Public transportation needs are met by either a fixed route or demand responsive (dial-a-ride) transit system. Fixed routes are generally used in the more populated urban areas while demand responsive transit and fixed route deviation are often used in rural areas and communities.

Social service transportation in Tulare County is being guided in a direction consistent with the Social Service Improvement Act of 1979 (AB 120). The law was enacted to promote the consolidation of such transportation services. The Act was established to improve efficient social service transportation by:

- Combining purchasing of necessary equipment
- Insure adequate training of vehicle drivers for reduced insurance rates
- Centralized dispatching of vehicles
- Centralized maintenance of vehicles
- Centralized administration
- Identification and consolidation of all existing sources of funding.

In Tulare County, social service transportation is provided by the following: local transit agencies, demand responsive operators and city/county special programs for senior citizens, and mental health organizations and programs for citizens with disabilities. TCAG reaches out to transportation providers identified in the Coordinated Transportation plan and ensures that calls for projects are communicated with social service providers. Many of these programs are funded and subsidized through state and federal grants, Transportation Development Act (TDA) funds, and local funds including Measure R."[6]

"Tulare County Area Transit (TCaT)

Tulare County [TCaT] has the largest land area to cover of all the transit providers in the County. The following is a summary of Tulare County's public transit system including a brief overview of the operations, fares, schedules, and short-range transportation development plans:

Tulare County Area Transit (TCaT) has been providing rural route service between various cities and towns since 1981. TCaT provides both rural route service and local demand responsive service in and around various County communities. TCaT operates 9 different fixed route services and provides a local dial-a-ride program between communities.

[6] Op. Cit. 3-55 thru 3-56.

Coordination and Schedules:

TCaT provides transit to the Community of Traver via Route 50, the Dinuba-London-Traver-Delft Colony route. Service is provided Monday through Saturday.[7]

Traffic

"The following criterion is a starting point in determining when a Traffic Impact Study (TIS) is needed. When a project:

1. Generates over 100 peak-hour operational trips assigned to a State highway facility.

2. Generates 50 to 100 peak-hour operational trips assigned to a State highway facility – and, affected State highway facilities are experiencing noticeable delay; approaching unstable traffic flow conditions (LOS "C" or "D").

3. Generates 1 to 49 peak-hour operational trips assigned to a State highway facility – the following are examples that may require a full TIS or some lesser analysis:

    a. Affected State highway facilities experiencing significant delay; unstable or forced traffic flow conditions (LOS "E" or "F").
    b. The potential risk for a traffic incident is significantly increased (i.e., congestion related collisions, non-standard sight distance considerations, increase in traffic conflict points).
    c. Change in local circulation networks that impact a State highway facility (i.e., direct access to State highway facility, a non-standard highway geometric design, etc.)."[8]

The Project would not result in the generation of these traffic volumes during construction or operation of the Project; therefore, a TIS is not required.

REGULATORY SETTING

Federal Agencies & Regulations

None that apply to the Project.

State Agencies & Regulations

Caltrans Guide for the Preparation of Traffic Impact Studies

"The California Department of Transportation (Caltrans) has developed this "Guide for the Preparation of Traffic Impact Studies" in response to a survey of cities and counties in California. The purpose of that survey was to improve the Caltrans local development review process (also

[7] TCAT website, http://tularecounty.ca.gov/rma/index.cfm/public-works/tulare-county-area-transit-tcat/ Accessed Sept. 2017.
[8] Guide for the Preparation of Traffic Impact Studies, California Department of Transportation, December 2002. Page 2. http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

known as the Intergovernmental Review/California Environmental Quality Act or IGR/CEQA process).

The Project would not generate permanent traffic increases during operation to warrant need for the preparation of a TIS, pursuant to Caltrans standards.

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan includes policies that apply to the proposed Project which are listed below.

TC-1.14 Roadway Facilities - As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.

TC-1.16 County Level Of Service (LOS) Standards - The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual.

HS-1.9 Emergency Access - The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

IMPACT EVALUATION

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Project Impact Analysis: ***No Impact***

The Project does not require the construction of any new roadways. However, the Project would result in short-term, temporary traffic impacts during the construction phase. This would occur as a result of a disruption of free-flow traffic while trenching, pipe installation, re-paving, and related activities occur in and around the Community. Once the pipelines have been installed and the roadways are returned to pre-Project conditions, the Project would not generate vehicle trips, with the exception of routine maintenance-related trips associated with

the wastewater treatment facility and pipelines. Therefore, the Project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. As such, the Project would result in ***No Project-specific Impacts***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if project-specific impacts were to occur. Since the Project would not result in Project-specific impacts, ***No Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there are ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Project Impact Analysis: ***Less Than Significant Impact***

The County does not have a congestion management plan applicable to the Project roadways.

Traffic generated by the Project would occur only during construction related activities. Traffic increases would, therefore, be short-term/temporary and would consist of equipment transport vehicles as well as employee and management vehicles. Less than twenty (20) vehicle trips per day are estimated over a construction period duration of approximately six months. The operation of the wastewater treatment facility and associated pipelines would not require any vehicle trips other than routine maintenance-related trips and operator trips (that are already occurring). Therefore, the Project would result in a ***Less Than Significant Project-specific Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County.

Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Traffic generated by the Project would occur during construction-related activities. Traffic increases would, therefore, be short-term/temporary and would consist of equipment transport vehicles as well as employee and management vehicles. Since the Project would result in less than significant Project-specific impacts, ***Less Than Significant Cumulative Impacts*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, there are ***Less Than Significant Project-specific and Cumulative Impacts*** related to this Checklist Item.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

Project Impact Analysis: ***No Impact***

The Project does not consist of any elements that would impact air traffic patterns. Therefore, the Project would result in ***no Project-specific impacts***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Since the Project would not result in potential impacts, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there are ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

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

Project Impact Analysis: ***No Impact***

The Project does not consist of any elements that would substantially increase hazards as a result of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, the Project would result in *no Project-specific impacts*.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Since the Project would not result in Project-specific potential impacts, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there are ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

e) Result in inadequate emergency access?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The Project construction-related activities may temporarily interrupt access to some properties. However, the interruptions would be no longer than a few hours while trenching- and installation-related activities occur at each property's access driveway. It is possible that Project construction-related activities would temporarily impact vehicle travel lanes while the pipelines are being installed underneath roadways. With the implementation of **Mitigation Measure 3.16-1**, the Project would result in a ***Less Than Significant Impact***.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. With implementation of **Mitigation Measure 3.16-1**, potential Project-specific impacts would be reduced to less than significant. Therefore, the Project's cumulative impacts would be ***Less Than Significant With Mitigation.***

Mitigation Measure(s):

3.16-1 **Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction to give adequate warning to the public of the construction and of any potentially dangerous condition to be encountered as a result thereof**.

Conclusion: ***Less Than Significant Impact With Mitigation***

With implementation of **Mitigation Measure 3.16-1**, potential Project-specific and Cumulative Impacts related to this Checklist Item would be reduced to ***Less Than Significant***.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Project Impact Analysis: ***No Impact***

The Project does not consist of any elements that would conflict with policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. The Project would result in ***no Project-specific impacts***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County.

The Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. Since the Proposed Project would not result in Project-specific impacts, ***No Cumulative Impact*** would occur.

Mitigation Measure(s): ***None Required***

Conclusion: ***No Impact***

As noted earlier, there are ***No Project-specific or Cumulative Impacts*** related to this Checklist Item.

REFERENCES

Tulare County General Plan Update 2030, Background Report, February 2010, page 5-4.

Tulare County adopted General Plan 2030 Update, page 13-2.

Tulare County adopted General Plan 2030 Update Environmental Impact Report (SCH # 2006041162).

Traver Community Plan 2014 Update.

Initial Study/Mitigated Negative Declaration (2014 SCH #2014091044), Appendix "F", *"Traver Community Plan Traffic Impact Assessment and Circulation Element"* prepared by VRPA Technologies.

Tulare County Area Transit (TCaT) Route 50 map, which was accessed September 28, 2017 at: http://tularecounty.ca.gov/rma/index.cfm/public-works/tulare-county-area-transit-tcat/

2014-2040 Regional Transportation Plan & Sustainable Communities Strategy, adopted June 30, 2014 which was accessed June 9, 2017 at: http://www.tularecog.org/wp-content/uploads/2015/06/Final-2014-Regional-Transportation-Plan-Sustainable-Communities-Strategy-FULL-DOCUMENT.pdf.

Guide for the Preparation of Traffic Impact Studies, California Department of Transportation, December 2002 which was accessed June 9, 2017 at: http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf

Tribal Cultural Resources
Chapter 3.17

SUMMARY OF FINDINGS

The proposed Matheny Tract Wastewater System Project (Project) will result in ***Less Than Significant Impacts With Mitigation*** to Cultural Resources. The Southern San Joaquin Valley Historical Resources Information Center, Bakersfield (Center) conducted a cultural resources records search in August 21, 2017 at the request of RMA Planning Branch staff, which is included as Appendix "C". In addition to the Center's search, the Native American Heritage Commission (NAHC) conducted a Sacred Lands File (SLF) search and provided their results on August 18, 2017 (see Appendix "C"). Also, the Traver Community Plan 2014 Update Initial Study/Mitigated Negative Declaration, Appendix "C", *"Cultural Resources Assessment, Proposed Planning Study Area for the Traver Community Plan Update, Tulare County, California"* prepared by Sierra Valley Cultural Planning is incorporated by reference. This information, and additional analysis in the resource discussion item, are used as the basis for determining that this Project will result in Less Than Significant Impacts With Mitigation.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

Several CEQA statutes and guidelines address requirements for cultural resources, including historic and archaeological resources.[1] If a proposed Project may cause a substantial adverse effect on the significance of a historical resource, then the Project may be considered to have a significant effect on the environment, and the impacts must be evaluated under CEQA (Section 21084.1). The definition of "historical resources" is included in Section 15064.5 of CEQA Guidelines, and includes both historical and archaeological resources. "Substantial adverse change" is defined as "physical demolition, destruction, relocation, or alteration of the resource…"

Section 15064.5 also provides guidelines when there is a probable likelihood of Native American remains existing in the Project site. Provisions for the accidental discovery of historical or unique archaeological resources encountered during construction include a recommendation for evaluation by a qualified archaeologist, with follow up as necessary.

Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands."

[1] *"CEQA and Historical Resources" CEQA Technical Advice Series"* http://ceres.ca.gov/ceqa/more/tas/page3.html

This section of the Draft Program/Project Environmental Impact Report (DEIR) for the Project meets CEQA requirements by addressing potential impacts to cultural resources on the proposed Project site. The "Environmental Setting" section provides a description of cultural resources in the region, with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" section provides a description of applicable State and local regulatory policies. Results of cultural resources reports from CHRIS are included in Appendix "C" of this DEIR. A description of potential impacts is provided, along with feasible mitigation measures to reduce the impacts to less than significant.

CEQA Thresholds of Significance

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

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources a defined in Public Resources Code section 5020.1(k), or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe."[2]

ENVIRONMENTAL SETTING

Records Search Results

The California Historical Resources Information Center (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield conducted a cultural resources records search and provided results dated August 21, 2017 to Tulare County RMA. According to search results, there have been seven previous cultural resource studies conducted within the project area and no additional studies conducted within the one-half mile radius. There are two recorded cultural resources within the proposed Project area and two recorded resources within the one-half mile radius.[3]

Native American Consultation

The Office of Planning and Research, State Clearinghouse (OPR/SCH), received a submittal from the Tulare County RMA on August 9, 2017, regarding a Notice of Preparation (NOP) of a Draft

2 CEQA Guidelines Appendix "G" Item XVII. Tribal Cultural Resources.
3 California Historical Resources Information Center (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield; August 21, 2017. Included as Appendix "C" of this DEIR.

Environmental Impact Report (DEIR) for the Traver Community Wastewater System Project. The Native American Heritage Commission (NAHC) was included in the list of agencies to be notified by OPR/SCH and provided a response to the NOP on August 8, 2017. The NAHC maintains a contact list of Native American Tribes as having traditional lands located within the County's jurisdiction. On August 8, 2017, Tulare County RMA submitted a Sacred Lands File Search (SLF) to the NACH and received a reply on August 18, 2017 indicating "negative results" of the SLF and provided a recommended list of six (6) Native American Tribes the County should consult with regarding the Project. As such, on August 8 and August 22, 2017, the County mailed (via certified-mail) tribal consultation letters to the six tribes recommended by the NAHC and an additional five (5) tribes that have expressed interest in projects occurring in the County (see Appendix "C").

REGULATORY SETTING

Federal Agencies & Regulations

The National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) established federal regulations for the purpose of protecting significant cultural resources. The legislation established the National Register of Historic Places and the National Historic Landmarks Program. It mandated the establishment of the State Historic Preservation Office (SHPO), responsible for implementing statewide historic preservation programs in each state. A key aspect of SHPO responsibilities include surveying, evaluating and nominating significant historic buildings, sites, structures, districts and objects to the National Register. The NHPA also established requirements for federal agencies to consider the effects of proposed federal Projects on historic properties (Section 106, NHPA). Federal agencies and recipients of federal funding are required to initiate consultation with the SHPO as part of the Section 106 review process.[4]

State Agencies & Regulations

California State Office of Historic Preservation (OHP)

The California State Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration and protection of California's irreplaceable archaeological and historical resources under the direction of the State Historic Preservation Officer (SHPO), appointed by the governor, and the State Historical Resources Commission, a nine-member state review board appointed by the governor.[5]

"State Historic Preservation Officers (SHPOs) administer the national historic preservation program at the State level, review National Register of Historic Places nominations, maintain data on historic properties that have been identified but not yet nominated, and consult with Federal

[4] Advisory Council on Historic Preservation, http://www.achp.gov/nrcriteria.html (updated March 11, 2008)
[5] Advisory Council on Historic Preservation, State Historic Preservation Officers, http://www.achp.gov/shpo.html, (updated Feb. 24, 2009)

agencies during Section 106 review. SHPOs are designated by the governor of their respective State or territory."[6]

Among OHP's responsibilities are identifying, evaluating, and registering historic properties; and ensuring compliance with federal and state regulations. The OHP administers the State Register of Historical Resources and maintains the California Historical Resources Information System (CHRIS) database. The CHRIS database includes statewide Historical Resources Inventory (HRI) database. The records are maintained and managed under contract by eleven independent regional Information Centers. Tulare, Fresno, Kern, Kings and Madera counties are served by the Southern San Joaquin Valley Historical Resources Information Center (Center), located in Bakersfield, CA. The Center provides information on known historic and cultural resources to governments, institutions and individuals.[7]

A historical resource may be eligible for inclusion in the California Register of Historical Resources (CRHR) if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important to our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.[8]

As indicated in Chapter 3.5 Cultural Resources, The Southern San Joaquin Valley Historical Resources Information Center, Bakersfield (Center) conducted a cultural resources records search on August 21, 2017, at the request of RMA Planning Branch staff. The CHRIS indicated that two recorded resources (P-54-002171 and P-54-004626) is located within the project area. The letter also indicated that two recorded resources (P-54-002170 and P-54-002172) are located within a one-half mile radius of the Project. These resources consist of Traver Canal, Banks Ditch, Southern Pacific/San Joaquin Railroad, and an historic era road. There are no recorded cultural resources within the project are 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. The CHRIS search results are included in Appendix "C" of this DEIR.

Tribal Consultation Requirements: SB 18 (Burton, 2004)

On September 29, 2004, Governor Schwarzenegger signed Senate Bill 18, Tribal Consultation Guidelines, into law. This bill amended Section 815.3 of the Civil Code, to amend Sections 65040.2, 65092, 65351, 65352, and 65560 of, and to add Sections 65352.3, 65352.4, and 65562.2 to, the Government Code, relating to traditional tribal cultural Places. SB 18, enacted March 1,

[6] Advisory Council on Historic Preservation, State Historic Preservation Officers, http://www.achp.gov/shpo.html, accessed September 25, 2017.
[7] California Office of Historic Preservation, About OHP, http://ohp.parks.ca.gov/?page_id=1066
[8] California Register: Criteria for Designation, http://www.ohp.parks.ca.gov/?page_id=21238

2005, creates a mechanism for California Native American Tribes to identify culturally significant sites that are located within public or private lands within the city or county's jurisdiction. SB 18 requires cities and counties to contact, and offer to consult with, California Native American Tribes before adopting or amending a General Plan, a Specific Plan, or when designating land as Open Space, for the purpose of protecting Native American Cultural Places (PRC 5097.9 and 5097.993). The Native American Heritage Commission (NAHC) provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe.[9]

As this Project does not involve adoption of a new or an amendment to an existing general plan, AB 18 does not apply to this case. As such, it was not necessary to seek tribal consultation regarding this Project.

Tribal Consultation Requirements: AB 52 (Gatto, 2014) [10]

This bill was approved by Governor Brown on September 25, 2014 and became effective July 1, 2015. This bill amended Section 5097.94 of, and to add Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3 to, the Public Resources Code, relating to Native Americans. The bill specifies that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource, as defined, is a project that may have a significant effect on the environment. This bill requires a lead agency to begin consultation with a California Native American tribe that is traditionally and culturally affiliated (can be a tribe anywhere within the State of California) with the geographic area of the proposed project, if the tribe requested to the lead agency, in writing, to be informed by the lead agency of proposed projects in that geographic area and the tribe requests consultation, prior to determining whether a negative declaration, mitigated negative declaration, or environmental impact report is required for a project.

Existing law establishes the Native American Heritage Commission (NAHC) and vests the commission with specified powers and duties. This bill required the NAHC to provide each California Native American tribe, as defined, on or before July 1, 2016, with a list of all public agencies that may be a lead agency within the geographic area in which the tribe is traditionally and culturally affiliated, the contact information of those agencies, and information on how the tribe may request those public agencies to notify the tribe of projects within the jurisdiction of those public agencies for the purposes of requesting consultation.

The NAHC provides protection to Native American burials from vandalism and inadvertent destruction, provides a procedure for the notification of most likely descendants regarding the discovery of Native American human remains and associated grave goods, brings legal action to

[9] Government Code §65352.3
[10] Assembly Bill No. 52, Chapter 532, http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52, accessed September 25, 2017.

prevent severe and irreparable damage to sacred shrines, ceremonial sites, sanctified cemeteries and place of worship on public property, and maintains an inventory of sacred places.[11]

The NAHC performs a Sacred Lands File search for sites located on or near the Project site upon request. The NAHC also provides local governments with a consultation list of tribal governments with traditional lands or cultural places located within the Project Area of Potential Effect. As indicated on the NAHC's letter of August 18, 2017, a Sacred Lands File check indicated negative results (that is, no Sacred Lands were identified) for the Project location (See Appendix "C" of the DEIR at NAHC Sacred Lands File search letter dated August 18, 2017). An opportunity has been provided to Native American tribes listed by the Native American Heritage Commission during the CEQA process as required by AB 52, and no tribes responded to the consultation requests within the mandatory response time-frames; therefore, this DEIR has been completed consistent and compliant with AB 52. (See Appendix "C" of the DEIR regarding Tribal consultation process).

CEQA Guidelines: Archaeological Resources

Section 15064.5(c) of CEQA Guidelines provides specific guidance on the treatment of archaeological resources as noted below.

"(1) When a Project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

(2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

(3) If an archaeological site does not meet the criteria defined in subdivision (a), but does meet the definition of a unique archeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the Project location contains unique archaeological resources.

(4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the Project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process."[12]

CEQA Guidelines: Human Remains

Public Resources Code Sections 5097.94 and 5097.98 provide guidance on the disposition of Native American burials (human remains), and fall within the jurisdiction of the Native American Heritage Commission:

[11] Native American Heritage Commission, About the Native American Heritage Commission, http://nahc.ca.gov/about/, accessed September 25, 2017.
[12] CEQA Guidelines, Section 15064.5(c)

"(d) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the Project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any Items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

(1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

(2) The requirements of CEQA and the Coastal Act.[13]

"(e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

(1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

(A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

(B) If the coroner determines the remains to be Native American:

1. The coroner shall contact the Native American Heritage Commission within 24 hours.

2. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

3. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or

(2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.

(A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.[14]

[13] Ibid. Section 15064.5(d).
[14] Ibid. Section 15064.5(e).

"(f) As part of the objectives, criteria, and procedures required by Section 21082 of the Public Resources Code, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."[15]

Local Policy & Regulations

Tulare County General Plan Policies

The General Plan has a number of policies that apply to Projects within Tulare County.[16] General Plan policies apply to the proposed Project are listed as follows:

ERM-6.1 Evaluation of Cultural and Archaeological Resources - 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 Protection of Resources with Potential State or Federal Designations - 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-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.9 Confidentiality of Archaeological Sites - The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

[15] Ibid. Section 15064.5(f)
[16] Tulare County General Plan 2030 Update, Part 1 – Goals and Policies Report

ERM-6.10 Grading Cultural Resources Sites - The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

IMPACT EVALUATION

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

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

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

Two on-site resources were identified by the CHRIS and no resources were identified by the Sacred Lands Files (SLF) search. Although all work will be limited to existing, disturbed rights-of-way, it is possible that subsurface discoveries could occur. Also, no responses were received from the tribes that were notified in compliance with AB 52 requirements through a list of potentially affected tribes provided by the NAHC. As such, it is not anticipated that Native American tribal cultural resources or remains will be found at any site within the Project planning area. However, **Mitigation Measures 17-1 and 17-2** are included in the unlikely event that Native American remains or tribal cultural resources are unearthed during any ground disturbance activities. These measure require that all work will immediately halt and the NAHC will be contacted to assess the findings and make appropriate mitigation recommendations. Therefore, there will be a ***Less Than Significant Cumulative Impacts With Mitigation*** related to this Checklist Item.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

As previously discussed, based on the analysis noted earlier, impacts to Tribal Cultural Resources will be reduced to a level of ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** with the implementation of **Mitigation Measures 17-1 and 17-2**.

Mitigation Measure(s): ***See Below***

17-1 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be

determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.

17-2Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during Project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. **There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:**
   a. **The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and**
   b. **If the coroner determines the remains to be Native American:**
      i. **The coroner shall contact the Native American Heritage Commission within 24 hours.**
      ii. **The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American.**
      iii. **The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98, or**
2. **Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.**
   a. **The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.**
   b. **The descendant fails to make a recommendation; or**
   c. **The landowner or his authorized representative rejects the recommendation of the descendent.**

Therefore, as noted earlier, in the unlikely event that Tribal Cultural Resource are discovered, implementation of **Mitigation Measures 17-1 and 17-2** would result in ***Less Than Significant Project-specific With Mitigation*** because of this Project.

Conclusion: ***Less Than Significant Impact With Mitigation***

As previously discussed, based on the analysis noted earlier, impacts to Tribal Cultural Resources will be reduced to a level of ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation*** with the implementation of **Mitigation Measures 17-1 and 17-2**.

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

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

See earlier discussion at Item a).

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

See earlier discussion at Item a).

Mitigation Measure(s): ***See Mitigation Measures 3.17-1 and 3.17-2***

See earlier discussion at Item a).

Conclusion: ***Less Than Significant Impact With Mitigation***

See earlier discussion at Item a).

ACRONYMS

CHRIS	California Historic Resources Information System
CRHR	California Register of Historical Resources
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act of 1966
OHP	California State Office of Historic Preservation
SHPO	State Historic Preservation Officers
SLF	Sacred Lands Files

REFERENCES

Advisory Council on Historic Preservation, State Historic Preservation Officers, accessed September 19, 2017 at: http://www.achp.gov/shpo.html, updated Feb. 24, 2009

Advisory Council on Historic Preservation, accessed September 19, 2017 at: http://www.achp.gov/nrcriteria.html, updated March 11, 2008

Assembly Bill No. 52, Chapter 532 accessed September 19, 2017 at: http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52,

CEQA Guidelines

California Historical Resources Information Center (CHRIS), Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield; August 21, 2017. Included as Appendix "C" of this DEIR

California Office of Historic Preservation, accessed September 19, 2017 at: http://ohp.parks.ca.gov/

CEQA and Historical Resources: CEQA Technical Advice Series, accessed September 25, 2017 at: http://ceres.ca.gov/ceqa/more/tas/page1.html

Initial Study/Mitigated Negative Declaration (2014 SCH #2014091044), Appendix "C", *"Cultural Resources Assessment, Proposed Planning Study Area for the Traver Community Plan Update, Tulare County, California"* prepared by Sierra Valley Cultural Planning.

Native American Heritage Commission, About the Native American Heritage Commission accessed September 19, 2017 at: http://nahc.ca.gov/about/.

Native American Heritage Commission, Sacred Lands File results dated August 18, 2017. (See Appendix "C" of the DEIR at NAHC Sacred Lands File)

National Park Service Program: State Historic Preservation Officers, accessed September 25, 2017 at:
http://www.cr.nps.gov/nr/shpolist.htm

Tulare County 2030 General Plan, August 2012

Tulare County 2030 General Plan Background Report, February 2010

Chapter 3.18

Utilities and Service Systems

SUMMARY OF FINDINGS

The proposed Project would result in ***Less Than Significant*** impacts related to utilities and services systems, and therefore, no mitigation measures are required. The impact analyses and determinations in this chapter are based upon the Traver Community Wastewater System Improvements Technical Memorandum prepared by AECOM in August of 2016 (see Appendix D of this document), along with information obtained from the References listed at the end of this chapter. A detailed review of potential impacts is provided in the following analysis.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

This section of the Draft Environmental Impact Report (DEIR) addresses potential impacts to Utilities and Service Systems. As required in CEQA Guidelines Section 15126, all phases of the Project would be considered as part of the potential environmental impact.

As noted in Section15126.2 (a), "[a]n EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there. Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas."[1]

[1] CEQA Guidelines, § 15126.2 (a)

The environmental setting provides a description of the Utilities and Service Systems setting in the County. The regulatory setting provides a description of applicable Federal, State and Local regulatory policies that were developed in part from information contained in the Tulare County 2030 General Plan, Tulare County General Plan Background Report, and/or County 2030 General Plan EIR incorporated by reference and summarized below. Additional documents utilized are noted as appropriate. A description of the potential impacts of the Project is provided and includes the identification of feasible mitigation measures (if necessary and feasible) to avoid or lessen the impacts.

Thresholds of Significance

- Increase wastewater beyond existing treatment capacity per the RWQCB
- Result in the need for waste water infrastructure that would cause impacts
- Result in the need for waste water infrastructure that would cause impacts
- Result in the need for water supplies or entitlements
- Result in the determination by the wastewater provider that it has adequate capacity
- Served by a landfill with sufficient permitted capacity to Project's needs
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs

ENVIRONMENTAL SETTING

"Tulare County and special districts provide many important services to County residents and businesses in unincorporated communities and hamlets such as water, wastewater, storm drainage, solid waste removal, utilities, communications, fire protection, law enforcement, and a number of other community facilities and services (schools, community centers, etc.)."[2]

"Water districts supply water to communities and hamlets throughout the County. Most communities and some hamlets have wastewater treatment systems; however, several communities including Three Rivers, Plainview, Alpaugh, and Ducor rely on individual septic systems. Storm drainage facilities are generally constructed and maintained in conjunction with transportation improvements or new subdivisions in communities. Solid waste collection in the County is divided into service areas, as determined by the Board of Supervisors, with one license for each area. Southern California Edison provides electric service to the south and central areas of Tulare County while PG&E provides electric service in the north. The [Southern California] Gas Company is the primary provider of natural gas throughout the County."[3]

[2] Tulare County General Plan Update 2030. Page 14-3.
[3] Ibid. 14-3.

REGULATORY SETTING

Federal Agencies & Regulations

U.S. Environmental Protection Agency (U.S. EPA) - Federal Regulation Tile 40, Part 503

In 1993, the U.S. Environmental Protection Agency (U.S. EPA) promulgated Standards for the Use or Disposal of Sewage Sludge (Code of Federal Regulations Title 40, Part 503), which establish pollutant limitations, operational standards for pathogen and vector attraction reduction, management practices, and other provisions intended to protect public health and the environment from any reasonably anticipated adverse conditions from potential waste constituents and pathogenic organisms.

This part establishes standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a treatment works. Standards are included in this part for sewage sludge applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are pathogen and alternative vector attraction reduction requirements for sewage sludge applied to the land or placed on a surface disposal site.

In addition, the standards in this part include the frequency of monitoring and recordkeeping requirements when sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator. Also included in this part are reporting requirements for Class I sludge management facilities, publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more.[4]

Resource Conservation and Recovery Act (RCRA)[5]

Congress passed RCRA on October 21, 1976 to address the increasing problems the nation faced from our growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for:

- Protecting human health and the environment from the potential hazards of waste disposal.
- Conserving energy and natural resources.
- Reducing the amount of waste generated.
- Ensuring that wastes are managed in an environmentally-sound manner
- To achieve these goals, RCRA established three distinct, yet interrelated, programs:
  - ✓ The solid waste program, under RCRA Subtitle D, encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal

[4] Title 40: Protection of Environment Part 503: Standards for the Use of Disposal of Sewage Sludge, http://www.ecfr.gov/cgi-bin/text-idx?SID=faac2040ebd49d57cc2786437545c8cf&node=40:30.0.1.2.42.1.13.1&rgn=div8
[5] United States Environmental Protection Agency, http://www.epa.gov/epawaste/laws-regs/rcrahistory.htm.

solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits the open dumping of solid waste.

- ✓ The hazardous waste program, under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal — in effect, from "cradle to grave."
- ✓ The underground storage tank (UST) program, under RCRA Subtitle I, regulates underground storage tanks containing hazardous substances and petroleum products. RCRA banned all open dumping of waste, encouraged source reduction and recycling, and promoted the safe disposal of municipal waste. RCRA also mandated strict controls over the treatment, storage, and disposal of hazardous waste.

State Agencies & Regulations

The Integrated Waste Management Act (Assembly Bill 939)

In 1989 the California legislature passed the Integrated Waste Management Act of 1989, known as AB 939. The bill mandates a reduction of waste being disposed: jurisdictions were required to meet diversion goals of 25% by 1995 and 50% by the year 2000. AB 939 also established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance.

The Regional Water Quality Control Board – Biosolids

In California, the beneficial reuse of treated municipal sewage sludge *(a.k.a.,* biosolids*)* generally must comply with the California Water Code in addition to meeting the requirements specified in Part 503 in Title 40 of the Code of Federal Regulations.

In July 2004, the State Water Resources Control Board adopted Water Quality Order No. 2004-12-DWQ (General Order), and certified a supporting statewide Programmatic Environmental Impact Report (PEIR)

The General Order incorporates the minimum standards established by the Part 503 Rule and expands upon them to fulfill obligations to the California Water Code. However, since California does not have delegated authority to implement the Part 503 Rule, the General Order does not replace the Part 503 Rule. The General Order also does not preempt or supersede the authority of local agencies to prohibit, restrict, or control the use of biosolids subject to their jurisdiction, as allowed by law.

Persons interested in seeking coverage under the General Order should contact the appropriate Regional Water Quality Control Board. Only applicants who submit a complete *Notice of Intent* (NOI), appropriate application fee, and are issued a Notice of Applicability by the executive officer of the appropriate Regional Water Quality Control Board are authorized to land apply biosolids at an agricultural, horticultural, silvicultural, or land reclamation site as a soil amendment under the General Order.

State Water Resources Control Board (formerly California Department of Public Health), Divisions of Drinking Water and Clean Water

Recycled water regulations are administered by both Central RWQCB and the California State Water Resources Control Board (SWRCB). The regulations governing recycled water are found in a combination of sources, including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations (CCR). Issues related to the treatment and distribution of recycled water are generally under the permitting authority of RWQCB and the Clean Water Division of the SWRCB.

CalRecycle (formerly California Integrated Waste Management Board)

CalRecycle governs solid waste regulations on the state level, delegating local permitting, enforcement, and inspection responsibilities to Local Enforcement Agencies (LEA). Regulations authored by CalRecycle (Title 14) were integrated with related regulations adopted by the State Water Resources Control Board (SWRCB) pertaining to landfills (Title 23, Chapter 15) to form CCR Title 27.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. In 1911, the CPUC was established by Constitutional Amendment as the Railroad Commission. In 1912, the Legislature passed the Public Utilities Act, expanding the Commission's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. It is tasked with ensuring safe, reliable utility service is available to consumers, setting retail energy rates, and protecting against fraud.

Local Policy & Regulations

Tulare County Local Agency Formation Commission

Since 1963, when State law created Local Agency Formation Commissions (LAFCO), commissions in each California County have encouraged the orderly formation of local government agencies, preserved agricultural and open space land, and discouraged urban sprawl. Tulare County LAFCO has jurisdiction over changes in local government organization occurring within Tulare County. The most significant recent changes are the result of the passage of AB 2838 (Hertzberg) in 2000, which significantly revised the Act and substantially strengthened the powers of LAFCO. The Act is now known as the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.

Tulare County LAFCO's Policy and Procedure Manual has policies that apply to projects within Tulare County. Formation of some level of governing entity will be necessary in order to

construct, operate, and maintain the proposed infrastructure. The policies that may relate to the Project are listed as follows:

Policy Number A-2 LAFCO Process - The powers and responsibilities of Local Agency Formation Commissions (LAFCOs) are defined in the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section56000 et seq.)

Policy Number C-1 Factors and Standards to be considered in Review of Proposal - The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 sets a number of factors that are to be considered when reviewing proposals for changes of organization, reorganization, incorporations, dissolution and other proposals processed by LAFCO

Policy Number C-6 Extraterritorial Services Agreement - The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 authorizes LAFCO to approve proposals to extend services beyond the jurisdictional boundary of a local agency, where the territory subject to receiving such services is within the affected agency's sphere of influence in anticipation of a later change of organization.

Tulare County General Plan Policies

The General Plan has policies that apply to potable water, wastewater, and storm water-related projects within Tulare County. General Plan policies that apply to the Project are listed as follows:

PFS-2.3 Well Testing - The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.5 New Systems or Individual Wells - 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.

PFS-3.1 Private Sewage Disposal Standards - The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-4.1 Stormwater Management Plans - The County shall oversee, as per Community Plan Content Table PF-2.1 and Specific Plan Content, Hamlet Plans Policy PF-3.3, and Table LU-4.3, the preparation and adoption of stormwater management plans for communities and hamlets to

reduce flood risk, protect soils from erosion, control stormwater, and minimize impacts on existing drainage facilities, and develop funding mechanisms as a part of the Community Plan and Hamlet Plan process.

PFS-4.7 NPDES Enforcement - The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.8 Hazardous Waste Disposal Capabilities - The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

IMPACT EVALUATION

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Project Impact Analysis: ***Less Than Significant Impact***

The purpose of the proposed Project is to eliminate the groundwater quality issues associated with the existing septic systems in the Community and to provide adequate sewer capacity and sewer infrastructure for existing and future land uses.

According to the current WDR, sampling of the existing influent is not a current requirement by the State. The assumed content of the influent that was used to determine existing and proposed conditions are conservative estimates for raw influent based on accepted values and influent of similar communities in the Central Valley.

The current Traver WDR requires weekly effluent monitoring for dissolved oxygen and electrical conductance only. If the proposed Project is approved, the current WDR will need to be updated and new effluent limits will be imposed on the WWTP in order to dispose of effluent in percolation ponds (that will infiltrate groundwater). These limits are:

BOD_5	30 mg/L
TSS	30 mg/L
TO_3-N	10 mg/L

It is anticipated that the Monitoring and Reporting Requirements that would be issued with the WDR would include groundwater monitoring requirements. The groundwater monitoring requirements would be used by the Regional Board to verify the effluent discharges via percolation or irrigation do not degrade the underlying groundwater. The monitoring would involve sampling from monitoring wells. Because of these requirements, and

regulation/oversight of the RWQCB, the proposed Project would not violate any water quality standards or waste discharge requirements.

The proposed sewer collection pipelines would not impact water quality. Minimal water may be used during construction phases for dust suppression. No chemicals will be used in the construction or operation of the pipelines that could be discharged into ground water.

Therefore, ***Less Than Significant Project-specific Impacts*** to wastewater treatment requirements would occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

On-going use of the Project would involve wastewater that is treated and discharged to holding ponds for eventual percolation into the ground. As described earlier, ground water quality will be maintained through monitoring of effluent quality prior to pond disposal as well as use of groundwater monitoring to ensure State standards are met. Therefore, cumulative impacts would also be ***Less Than Significant***.

Mitigation Measure(s): ***None Required***

Conclusion: ***Less Than Significant Impact***

As noted earlier, Project-specific impacts would be less than significant, and there would be ***Less Than Significant Cumulative Impact*** related to this Checklist item.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The proposed Project itself is the improvement (likely to be completed in phases) of the existing Traver Community Wastewater System and any environmental impacts resulting from the improvements are discussed within this document. Mitigation Measures are contained in the Biological Resources, Cultural Resources, Transportation/Traffic, and Tribal Cultural Resources sections and implementation of those measures will ensure impacts remain less than significant. Therefore, Project-specific impacts would be ***Less Than Significant with Mitigation***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As the proposed Project includes improvements of the Traver Community WWTP, potential impacts resulting from Project implementation are discussed herein. As described in the various impact areas in Chapter 3 of this document, ***No Cumulative Impacts*** would occur.

Conclusion: ***No Cumulative Impact***

As noted previously, Project-specific impacts would be less than significant, and there would be ***No Cumulative Impact*** related to this Checklist Item.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Project Impact Analysis: ***Less Than Significant Impact***

The Project site consists mainly of existing rural and semi-rural paved roads and existing road rights-of-way. The wastewater pipelines would be trenched in the existing rights-of-way that generally consist of gravel road shoulders, which is typical of roadways in the area while the package treatment plant would be constructed within the existing WWTP footprint site.

To prevent water and wind erosion during the construction-related activities period, a Storm Water Pollution Prevention Plan (SWPPP) would be developed for the Project as required for all projects that disturb more than one acre in area. As part of the SWPPP, the applicant (in this instance the County of Tulare) would be required to provide erosion control measures to protect the topsoil. Any stockpiled soils would be watered and/or covered to prevent loss due to wind erosion as part of the SWPPP during construction-related activities. As a result of these efforts, loss of topsoil and substantial soil erosion during the construction-related activities period are not anticipated. With implementation of the required SWPPP, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

With implementation of the above noted SWPPP, minimal (if any) impacts would occur during the construction phase of the Project. Following completion of construction-related activities, there would be no impacts. Therefore, cumulative impacts would be ***Less Than Significant***.

Conclusion: ***Less Than Significant Impact***

As noted earlier, as the Project would be designed and built in accordance with regulatory agency requirements. Therefore, Project-specific and cumulative impacts would be ***Less Than Significant*** related to this Checklist Item.

d) Have sufficient water supplies available to serve the project been identified from existing entitlements and resources, or are new or expanded entitlements needed?

Project Impact Analysis: ***Less Than Significant Impact***

The Project involves the construction of wastewater pipelines and process improvements at the existing WWTP. Minimal water would be used during the construction phase for dust control. Construction-related water used for dust control would come from an existing public water system and would be transported (through the use of water trucks) to each segment of the pipeline. Therefore, the Project would utilize water from existing sources only during the short-term, temporary construction-related activities phase and would not require new or expanded water entitlements. As such, Project-specific impacts would be ***Less Than Significant***.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As noted earlier, the Project would utilize water from existing sources only during the short-term, temporary construction-related activities phase for dust suppression and would not require new or expanded water entitlements. As such, Cumulative impacts would be ***Less Than Significant***.

Conclusion: ***Less Than Significant Impact***

The Project would utilize a small amount of water during construction for dust control, and would not use any water during daily operation beyond the amount currently used by the existing septic systems. As discussed earlier, Project-specific and cumulative impacts would be ***Less Than Significant***.

e) 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?

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

The proposed Project itself is the improvement (likely to be completed in phases) of the existing Traver Community Wastewater System and any environmental impacts resulting from the improvements are discussed within this document. Mitigation Measures are identified in the Biological Resources, Cultural Resources, Transportation/Traffic and Tribal Cultural Resources sections and implementation of those measures will keep impacts less than significant. Therefore, Project-specific impacts would be ***Less Than Significant with Mitigation***.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As the proposed Project includes improvements to the Traver Community WWTP, potential impacts resulting from Project implementation are discussed herein. As described in the various impact areas in Chapter 3 of this document, ***No Cumulative Impacts*** to this Checklist Item would occur.

Conclusion: ***No Impact***

As noted previously, Project-specific impacts would be less than significant, and there would be ***No Cumulative Impact*** related to this Checklist Item.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Project Impact Analysis: ***Less Than Significant Impacts***

The Project would generate minimal solid waste (most likely in the form of construction-related materials) as a result of the construction phase of the Project. Solid waste materials would be properly disposed of at a local landfill (most likely County owned and operated Visalia Landfill as it is the nearest operating landfill). Upon completion of construction-related activities, the proposed Project would not result in the generation of any solid waste. Therefore, ***Less Than Significant Impacts*** would occur.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As the Project would comply with applicable General Plan policies and there is adequate capacity at landfills to accommodate any solid waste resulting from the Project, there would be ***No Project-specific or Cumulative Impacts***.

Conclusion: ***Less Than Significant Impact***

As noted previously, Project-specific impacts would be less than significant, and there would be ***No Cumulative Impact*** related to this Checklist Item.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Project Impact Analysis: ***No Impact***

Project solid waste resulting from construction-related activities would be disposed of by the County's franchised hauler on a periodic basis and would be properly disposed at a County owned/operated landfill (likely Visalia Landfill). All solid waste disposal procedures would be in compliance with the relevant provisions of AB 32 and AB 939. As such, there would be ***No Project-specific Impacts*** related to this Checklist Item.

Cumulative Impact Analysis: ***No Impact***

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the Tulare County 2030 General Plan, General Plan background Report, and/or Tulare County 2030 General Plan EIR.

As the Project would comply with applicable General Plan policies and there is adequate capacity at landfills to accommodate any solid waste resulting from the Project, there would be ***No Project-specific or Cumulative Impacts***.

Conclusion: ***No Impact***

No Project-specific or Cumulative Impacts related to this Checklist Item would occur.

ABBREVIATIONS

NPDES	National Pollution Discharge Elimination System
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SWPPP	Storm Water Pollution Prevention Plan
UST	Underground Storage Tank

REFERENCES

Tulare County General Plan Update 2030

Tulare County Recirculated Draft Environmental Impact Report (SCH # 2006041162).

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Metcalf & Eddy, "Wastewater Engineering," third edition.

AECOM, *Traver Community Wastewater System Improvements Technical Memorandum* (2016).

AECOM, *Traver Community Wastewater System Improvements, Attachment 1 – Plan of Study* (2017).

Provost & Pritchard Consulting Group, *Traver Community Sewer Collection and Wastewater Treatment Evaluation - Supplement to the 2005 Report* (2014).

Chapter 3.19

Mandatory Findings of Significance

SUMMARY OF FINDINGS

Biological and cultural evaluations were conducted by RMA staff. As the Project (and all of its components) will be undertaken in existing disturbed areas and, based upon information/data received from the California Natural Diversity Database (CNDDB, see Appendix "B" of this DEIR); Southern San Valley Historical Resources Information Center, at California State University, Bakersfield (Center) and the California Native American Heritage Commission Sacred Lands File search (see Appendix "C" of this document) it is unlikely that these resources would be impacted. The results of these efforts are contained in technical studies in Appendices "B" and "C" of this EIR; respectively. The CNDDB indicates that there were no special-status species, wildlife, plant species; while the cultural study concluded there were no surface prehistoric features observed on the Project area. However, due to the Project's geographic locations and existing conditions there is potential for special status biological species to occur on the site or to forage through the site between the time the biological review was conducted and when construction begins; and for sub-surface resources to be discovered during excavation-related activities while earth-moving or excavating activities are occurring at the construction phase of the Project. Also, the Project has the potential to expose sensitive receptors to construction-related noise exceeding acceptable levels set forth in the County General Plan. Mitigation Measures are recommended in Chapter 3 that would reduce all of these potential significant impacts in these Resource areas to less than significant. Therefore, based on the substantial and substantive analyses provided in this EIR, there is no evidence that making a Mandatory Findings of Significance for any resource impact would be supported by the evidence contained herein.

INTRODUCTION

California Environmental Quality Act (CEQA) Requirements

CEQA Guidelines "Mandatory Findings of Significance" (Section 15065(a)) lists the following potential impacts that need to be addressed by a lead agency:

> 15065(a): *"A lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur:*

(1) 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; substantially 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.

(2) The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.

(3) The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

(4) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly."

Under the California Environmental Quality Act (CEQA), an EIR must be prepared when certain specified impacts may result from construction or implementation/operation of a project. An EIR has been prepared for the proposed project, which fully addresses all of the Mandatory Findings of Significance, as described below.

Under Section 15065(a) of the CEQA Guidelines, a finding of significance is required if a project "has the potential to substantially degrade the quality of the environment." In practice, this is the same standard as a significant effect on the environment, which is defined in Section 15382 of the CEQA Guidelines as "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 significance." This EIR, in its entirety, addresses and discloses potential environmental effects associated with construction and operation of the proposed Project, including direct, indirect, and cumulative impacts related to the following environmental factors:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources

- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

As summarized in Project Requirements/Mitigation Measures Section, this EIR discusses potential environmental resource impacts, the level of significance prior to mitigation, project requirements that are otherwise required by law or are incorporated as part of the project description, feasible mitigation measures, and the level of significance after the incorporation of mitigation measures.

This section of the Draft Environmental Impact Report (DEIR) meets CEQA requirements by making Mandatory Findings of Significance relative to impacts of the proposed Project site located in the San Joaquin Valley portion of Tulare County. The "Environmental Setting" section summarizes environmental resources in the region with special emphasis on the proposed Project site and vicinity. The "Regulatory Setting" provides a description of applicable State and local regulatory policies. A description of the potential impacts of the proposed Project is also provided and includes the identification of feasible mitigation to avoid or lessen the impacts.

Long Term Impacts

As described in Section 15065(a)(2), a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. This document addresses the short-term and irretrievable commitment of natural resources to ensure that the consumption is justified on a long-term basis.

Cumulative Impacts

Under Section 15065(a)(1) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to (1) substantially reduce the habitat of a fish or wildlife species; (2) cause a fish or wildlife population to drop below self-sustaining levels; or (3) substantially reduce the number or restrict the range of an endangered, rare, or threatened species. Section 4.3 (Biological Resources) of the EIR fully addresses impacts related to the reduction of the fish or wildlife habitat, the reduction of fish or wildlife populations, and the reduction or restriction of the range of special-status species.

Impacts to Species

Section 15065(a)(1) of the CEQA Guidelines states that a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the

project has the potential to eliminate important examples of a major period of California history or prehistory. Section 15065(a)(1) amplifies Public Resources Code 21001(c) requiring that major periods of California history are preserved for future generations. It also reflects the provisions of Public Resource Code Section 21084.1 requiring a finding of significance for substantial adverse changes to historical resources.

Impacts to Historical Resources

Section 15064.5 of the CEQA Guidelines establishes standards for determining the significance of impacts to historical resources and archaeological sites that are an historical resource. Section 3.5 Cultural Resources of this EIR (which is supported by a Cultural Resources Technical Report) fully addresses impacts related to California history and prehistory, historic resources, archaeological resources, and paleontological resources.

Impacts on Human Beings

Consistent with Section 15065(a)(4) of the CEQA Guidelines, a lead agency shall find that a project may have a significant effect on the environment where there is substantial evidence that the project has the potential to cause substantial adverse effects on human beings, either directly or indirectly. Under this standard, a change to the physical environment that might otherwise be minor must be treated as significant if people will be significantly affected. This factor relates to adverse changes to the environment of human beings generally, and not to effects on particular individuals. While changes to the environment that could indirectly affect human beings will be represented by all of the designated CEQA issue areas, those that could directly affect human beings include air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, public services, transportation/traffic, and utilities, which are addressed in this EIR.

Thresholds of Significance

The geographical area may be countywide, statewide, or nationwide, depending on the nature of the impact. Thresholds of Significance for impacts to biological resources are addressed in detail in Chapter 3.4 Biological Resources of this document. Thresholds of Significance for impacts to cultural resources, including impacts to historic and prehistoric resources, are addressed in Chapter 3.5 Cultural Resources of this document.

ENVIRONMENTAL SETTING

“Tulare County… is located in a geographically diverse region with the majestic peaks of the Sierra Nevada framing its eastern region, while its western portion includes the San Joaquin valley floor, which is very fertile and extensively cultivated. Tulare County is the second-leading agricultural-producing county in the U.S. Fresno County is currently (2004) the top producer. In

addition to its agricultural production, the county's economic base also includes agricultural packing and shipping operations."[1]

Native Vegetation

The native vegetation of the Valley is predominately characterized by the purple needlegrass series, valley oak series, vernal pools and wetland communities, and blue oak series. Fauna associated with this section include mule deer (*Odocoileus hemionus*), black-tailed deer (*Odocoileus hemionus columbianus*), coyotes (*Canis latrans*), white-tailed jackrabbits (*Lepus townsendii*), kangaroo rats (*Dipodomys ingens*), kit fox (*Vulpes macrotis*), and muskrats (*Ondatra Zibethicus*). Birds include waterfowl, hawks, golden eagles (*Aquila chrysaetos*), owls, white-tailed kites (*Elanus leucurus*), herons, western meadowlark (*Sturnella neglecta*) and California quail (*Callipepla californica*).[2]

Existing Cultural and Historic Resources

"Tulare County's known and recorded cultural resources were identified through historical records, such as those found in the National Register of Historic Places, the Historic American Building Survey/Historic American Engineering Record (HABS/HAER), the California Register of Historic Resources, California Historical Landmarks, and the Tulare County Historical Society list of historic resources."[3]

Due to the sensitivity of many prehistoric, ethnohistoric, and historic archaeological sites, locations of these resources are not available to the general public. The Information Center at California State University, Bakersfield houses records associated with reported cultural resources surveys, including the records pertinent to sensitive sites, such as burial grounds, important village sites, and other buried historical resources protected under state and federal laws.

REGULATORY SETTING

Federal Agencies & Regulations

See Chapters 3.4 and 3.5 of this document for federal regulations related to biological and cultural resources; respectively.

State Agencies & Regulations

See Chapters 3.4 and 3.5 of this document for state regulations related to biological and cultural resources; respectively.

[1] 2030 Tulare County General Plan Update Background Report. Page 1-2.
[2] Ibid. 9-10.
[3] Op. Cit. 9-56.

Local Policy & Regulations

See Chapters 3.4 and 3.5 of this document for local regulations related to biological and cultural resources; respectively.

IMPACT EVALUATION

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

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

Chapter 3.4, Biological Resources, addresses potential impacts to biological resources. A biological review of the Project area (particularly adjacent to and along the pipeline route) was conducted by RMA staff and information obtained from the CNDDB search. As noted earlier, the areas where the Project will occur are already utilized (e.g., roads and shoulders) and in a continuously disturbed state. There is no habitat whatsoever where any special status species may occur within or adjacent to the Project. The Traver Canal is the nearest waterway which runs along the northern boundary of the Community of Traver. This facility is not naturally occurring and is primarily used to convey seasonal water flows for agricultural irrigation. As such, there is no habitat of value for common or special status species. The CNDDB can be found in Appendix "B" of this DEIR. However, based on the location and geographic condition of the proposed Project site, there is potential for the animal species to occur or forage on the site that may be impacted by the proposed Project activities. Therefore, however unlikely an occurrence may occur, Mitigation Measures 3.4-1 through 3.4-7 contained in Chapter 3.4 would minimize potential impact to sensitive biological resources thereby limiting the potential impacts to Less Than Significant With Mitigation. As noted earlier, results of the assessment are based upon database and literature searches, as well as a site visit. The biological evaluation determined that:

3.4 a) ***Less Than Significant Impact With Mitigation:***

Based on the field survey and research, it can be reasonably concluded that the existing operations have rendered the Project site unsuitable for all but the most urban-tolerant species. Any native habitats once present on the site were completely transformed by the urban-type uses; however, at least two special-status species (San Joaquin kit fox and Swainson's hawk) are known to forage and inhabit the Project vicinity. ***Less Than Significant with Mitigation Project-specific Impacts*** related to this Checklist Item would occur.

3.4 b) ***No Impact***

Based upon the lack of riparian habitat, ***No Impacts*** related to this Checklist Item would occur.

3.4 c) ***No Impact:***

There is no wetland habitat for special study species located onsite. As such, ***No Impact*** related to this Checklist Item would occur.

3.4 d) ***No Impact:***

The Project site does not serve as a fish or wildlife movement corridor. The existing canal banks could potentially serve as a movement corridor for kit fox; however no canals will be disturbed as the sewer collection system and pipelines will be located within existing rights-of-way. ***No Impact*** related to this Checklist Item would occur.

3.4 e) ***No Impact:***

The proposed Project would not conflict with any policies or ordinances protecting biological resources. ***No Impact*** related to this Checklist Item would occur.

3.4 f) ***No Impact:***

There are two habitat conservation plans that apply in Tulare County. The proposed Project does not conflict with these plans. ***No Impact*** related to this Checklist Item would occur.

Cumulative Impact Analysis: ***Less Than Significant Impact***

The geographic area of this cumulative analysis is the San Joaquin Valley, the State of California, and the Western United States. As noted in Chapter 3.4, cumulative impacts related to biological resources would be ***Less Than Significant***

Mitigation Measure(s): ***See Mitigation Measures 3.4-1 through 3.4-7 outlined in Chapter 3.4.***

Conclusion: ***Less Than Significant Impact With Mitigation***

Potential Project-specific and cumulative impacts to biological resources would be ***Less Than Significant With Mitigation***.

Findings: Impacts to examples of the major periods of California history or prehistory

Project Impact Analysis: ***Less Than Significant Impact With Mitigation***

Chapter 3.5, Cultural Resources, discusses impacts to historic or prehistoric resources in greater detail. Two recorded resources was identified within the proposed Project area and two recorded resources were identified within ½ mile of the proposed Project site as a result of a California Historic Resources Information System (CHRIS) records search conducted by the Southern San Joaquin Valley Information Center (see Appendix "C"). Although no surface evidence exists, there is always potential for sub-surface evidence to be discovered during Project-related excavation for pipelines and appurtenant structures. Mitigation Measures are included to address the potential of cultural resources being unearthed as a result of Project-related ground excavation activities. These Mitigation Measures were added to address the possibility that important archaeological resources or human remains could be unearthed during Project-related ground excavation. Mitigation Measures 3.5-1, 3.5-2, and 3.5-3 are included in the unlikely event that archaeological resources, paleontological resources, or in the event that human remains are found/unearthed during Project-related ground excavation. Implementation of these Mitigation Measures as detailed in Chapter 3.5 would reduce any significant impacts to less than significant.

Cumulative Impact Analysis: ***Less Than Significant Impact With Mitigation***

The geographic area of this cumulative analysis is Tulare County.

The proposed Project would only contribute to cumulative impacts related to this Checklist Item if Project-specific impacts were to occur. The proposed Project would be mitigated to ***Less Than Significant Project-specific and Cumulative Impacts With Mitigation***.

Mitigation Measure(s): ***See Mitigation Measures outlined in Chapter 3.5.***

Conclusion: ***Less Than Significant Impact With Mitigation***

Implementation of the above mitigation measures would reduce potential Project-specific and cumulative impacts to cultural resources to a level that is less than significant.

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)?

Cumulative Analysis: ***See Chapter 4***

Cumulative impacts are address for each checklist item. In addition, cumulative impacts are summarized in Chapter 4. Cumulative impacts for biological and cultural resources are discussed within Chapters 3.4 and 3.5, respectively.

"CEQA Guidelines Section 15130(a) requires that an EIR discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. A consideration of actions included as part of a cumulative impact scenario can vary by geographic extent, time frame, and scale. They are defined according to environmental resource issue and the specific significance level associated with potential impacts. CEQA Guidelines 15130(b) requires that discussions of cumulative impacts reflect the severity of the impacts and their likelihood of occurrence. The CEQA Guidelines note that the cumulative impacts discussion does not need to provide as much detail as is provided in the analysis of project-only impacts and should be guided by the standards of practicality and reasonableness and focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impacts."[4]

Conclusion for Cumulative Impacts to Biological Resources (Chapter 3.4):

Less Than Significant Impact With Mitigation

With implementation of Mitigation Measures 3.4-1 through 3.4-7, potential project-specific and cumulative impacts related to this Checklist Item would be reduced to ***Less Than Significant***.

Conclusion for Cumulative Impacts to Cultural Resources (Chapter 3.5):

Less Than Significant Impact With Mitigation

With implementation of Mitigation Measures 3.5-1 through 3.5-3, potential Project-specific and cumulative impacts related to this Checklist item would be reduced to ***Less Than Significant Impact With Mitigation***.

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

Project Impact Analysis: ***No Impact***

There are ***No Environmental Adverse Effects*** from this Project on human beings. Rather, improving the reliability of the existing wastewater system would benefit the community as it would provide sanitary disposal of wastewater generated by the community thereby ensuring reliable collection and treatment of wastewater and preserving water quality by avoiding discharging contaminated water into the natural environment.

Cumulative Impact Analysis: ***No Impact***

[4] Tulare County 2030 General Plan RDEIR, pages 5-3 to 5-4.

The geographic area of this cumulative analysis is Tulare County. This cumulative analysis is based on the information provided in the traffic report, Tulare County 2030 General Plan, Tulare County General Plan Background Report and/or Tulare County 2030 General Plan EIR.

There are ***No Environmental Adverse Effects*** from this Project to human beings.

Mitigation Measures: ***None Required***

Conclusion: ***No Impact***

There would be ***No Impacts*** which would cause substantial adverse effects to impacts to human beings either directly or indirectly.

DEFINITIONS/ACRONYMS

Definitions

See Chapters 3.4 and 3.5 of this document for definitions related to biological and cultural resources.

Acronyms

See Chapters 3.4 and 3.5 of this document for definitions related to biological and cultural resources.

Summary of Cumulative Impacts
Chapter 4

CUMULATIVE IMPACTS ANALYSIS UNDER CEQA

Section 15355 Cumulative Impacts

""Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."[1]

Section 15130 Discussion of Cumulative Impacts

"(a) An EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in section 15065(a)(3). Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.

(2) When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency's conclusion that the cumulative impact is less than significant.

(3) An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the

[1] CEQA Guidelines Section 15355

project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:

(1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

(B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

(2) When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.

(3) Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

(4) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available, and

(5) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

(c) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

(d) Previously approved land use documents, including, but not limited to, general plans, specific plans, regional transportation plans, plans for the reduction of greenhouse gas emissions, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for tiering and program EIRs. No further cumulative impacts analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the lead agency determines that the regional or area wide cumulative impacts of the proposed project have already been adequately addressed, as defined in section 15152(f), in a certified EIR for that plan.

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section15183(j)."[2]

Tulare County is the geographic extent for most impact analysis. This geographic area is the appropriate extent because of the following reasons:

1. The proposed Project is in Tulare County and County of Tulare is the Lead Agency; and
2. Tulare County General Plan polices applies to the proposed Project.

The basis for other resource specific cumulative impact analysis includes:

- For Air Quality and Greenhouse Gas Emissions it is the San Joaquin Valley Air Basin;
- For Biological Resources it is the San Joaquin Valley; and
- For Hydrology it is the Tulare Lake Basin.

PAST, PRESENT, PROBABLE FUTURE PROJECTS

Tulare County Association of Governments (TCAG) Blueprint Scenario

Under the Tulare County Regional Blueprint Preferred Growth Scenario, TCAG suggested a 25% increase over the status quo scenario to overall density by 2050. The preferred growth scenario principles included directing growth towards incorporated cities and communities where urban development exists and where comprehensive services and infrastructure are/or will be provided. Another relevant preferred scenario is the creation of urban separators around cities. The proposed Project location is outside incorporated areas and would be consistent with the goal of separating urban boundaries.[3]

[2] CEQA Guidelines, Section 15130
[3] Tulare County Associated of Governments Blueprint 2050, Preferred Scenario (2009).

Tulare County 2030 General Plan

The Cumulative Analysis outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR notes regional population growth (which in part was developed by TCAG) and a number major projects. Regional population projections are provided in the **Table 4-1**.[4]

Table 4-1
Regional Population Projections and Planning Efforts

Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
City of Dinuba	2006-2026	33,750	Farmland conversion; conflicts with agricultural zoning and Williamson Act contracts; conversion of agricultural soils to non-agricultural use; regional air quality impacts; and climate change-greenhouse gases.
City of Woodlake			Unavailable.
City of Visalia	1991-2020	165,000	Air quality; biological resources; land use conflicts; noise; transportation/traffic; mass transit; agricultural resources; water supply; and visual resources.
City of Tulare	2007-2030	134,910	Farmland conversion; aesthetics; water supply; traffic; air quality; global climate change; noise; flooding from levee or dam failure; biological resources; and cultural resources.
City of Farmersville	2002-2025	12,160	Agricultural resources; agricultural land use conflicts; air quality; and traffic circulation.
City of Exeter			Information unavailable at time of analysis.
City of Lindsay	1990-2010	17,500	Air quality and farmland land conversion.
City of Porterville	2006-2030	107,300	Farmland conversion; air quality; noise; and biological resources.
City of Kingsburg	1992-2012	16,740	Farmland conversion and air quality.
City of Delano	2005-2020	62,850	Air quality; noise; farmland conversion; disruption of agricultural production; and conversion of agricultural soils to non-agricultural use.

[4] Tulare County General Plan 2030 Update Recirculated Draft EIR. Page 5-4 to 5-5.

Table 4-1
Regional Population Projections and Planning Efforts

Jurisdiction	General Plan Planning Timeframe	General Plan Buildout Population	Significant Environmental Impacts
County of Fresno	2000-2020	1,113,790	Farmland conversion; reduction in agricultural production; cancellation of Williamson Act Contracts; traffic; transit; bicycle facilities; wastewater treatment facilities; storm drainage facilities; flooding; police protection; fire protection; emergency response services; park and recreation facilities; library services; public services; unidentified cultural resources; water supply; groundwater; water quality; biological resources; mineral resources; air quality; hazardous materials; noise; and visual quality.
County of Kern	2004-2020	1,142,000	Air quality; biological resources; noise; farmland conversion; and traffic.
County of Kings*	1993-2005	149,100 (low) 228,000 (high)	Biological resources; wildlife movement; and special status species.

* *The adopted Kings County General Plan did not identify a projected population for 2005. The General Plan does include population projections for 2010, which is included in this table.*

SOURCE: City of Delano, 1999; City of Dinuba, 2008; City of Farmersville, 2003; City of Kingsburg, 1992; City of Lindsay, 1989; City of Porterville, 2007; City of Visalia, 2001, 1991; County of Fresno, 2000; County of Kern, 2004; County of Kings, 2009; DOF, 2007; TCAG, 2008.

In addition to the Regional Growth Projections used for the cumulative impact analysis, the Tulare County General Plan Update 2030 Recirculated Draft EIR noted the following Major Projects

- **Goshen**: Status – On-Going. On December 10, 2013, the Tulare County Board of Supervisors (BOS) approved the Planning Branch proposal to update the Goshen Community Plan. The Goshen Community Plan Update is being updated to implement the 2030 Tulare County General Plan (2012). The project Study Area Boundary will assess the potential project impacts from the proposed land use changes, for the areas north of Riggin Drive and Ave 320 to the North, Road 60 to the east, Avenue 304 to the South, and into the City of Visalia to the east. The project EIR is based on a projected annual population growth rate of 1.3%. Additional growth beyond the 1.3% annual growth rate will require further growth analysis pursuant to CEQA. The Goshen Community Plan Update will become consistent with the General Plan 2030 Update, and will include the following primary goals and objectives: (1) Land use and environmental planning - Promote development within planning areas next to the Regional State Route 99 Corridor; (2) Improvements for a "disadvantaged community"; and 3) Strengthening the relationship between the RMA the Tulare County Association of Governments (TCAG) which will help to facilitate the funding and implementation of several key transportation programs such as Safe Routes to

Schools, Complete Streets, and Bike/Pedestrian Projects. By pursuing these transportation programs through a heightened collaborative process, the likelihood of getting actual projects in the ground will be realized faster than historically achieved. In doing so, these communities and others can become safer and healthier by providing a more efficient transportation network. Some of the major components of the Community Plan Update are based on Caltrans reconstructing the over-crossing at Betty Drive and State Route 99 in the Community of Goshen. There are five additional projects that have been analyzed; three directly and two in relationship to the Project's impacts to these areas. The County is proposing more than 20 new land use and zoning designations, including a Mixed Use zone. Also in the process is an update to the Zoning Code to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan.

- **Yokohl Ranch**: Status – GPI allowed to proceed in February 2007. On September 13, 2005, the Tulare County Resource Management Agency received a request from the J.G. Boswell Company and the Eastlake Company, to initiate the formal process to amend the Tulare County General Plan, including the Foothill Growth Management Plan (FGMP), to change the land use designation for the 36,000 acre Yokohl Ranch property from 'Extensive Agriculture' to 'Planned Community Area'. According to the applicants, the proposed amendment will result in master planned communities that balance the needs for housing, neighborhood commercial uses, recreation, ranching operations and open space. As such, 40% (14,400 acres) of the ranch is proposed for development with 60% (21,600 acres) of the property to remain as untouched open space and ranchlands. The developed portions of the ranch will include the Village of Yokohl Ranch, an active adult community accessible to Yokohl Drive; and a Ranch Resort Lodge Enclave located in the northern reaches of the site, approximately four miles south of Lake Kaweah.

- **Rancho Sierra**: Status – GPA approved. The project site consists of 114.6 acres. The site was a golf course facility located on both sides of Liberty Avenue (Avenue 264), east of Road 124, south of the city of Visalia. There are 30 existing homes within the golf course area but not a part of this application. The intended use is to subdivide the site into 175 single family residential lots. The project has been approved.

- **Earlimart**: Status – On-Going. The Earlimart Community Plan Update (General Plan Amendment No. 14-005) is being updated to implement the Tulare County General Plan 2030 Update (2012). Among the entitlements to be updated are: (1) the General Plan Amendment, (2) changes to Zoning District Boundaries, and (3) changes to the Zoning Code Ordinance creating a New Mixed Use Zoning District only for the Earlimart Community Plan Update. Consistent with the General Plan and the Community Plan Update Study Area Boundary, the land uses and alternative land use patterns were considered based on expansion to the Urban Development Boundary (UDB) and their potential impacts to the environment. In addition, a Complete Streets Program was approved by the Board of Supervisors on December 15, 2015, for inclusion in the Circulation Element of this Community Plan Update. The Earlimart Complete Streets Program has thoroughly analyzed the alternative forms of transportation, including transit, bicycle ways, and pedestrian circulation. The three (3) projects that are being analyzed at the project level in this DEIR include: (1) the New High School Project, (2)

the Northern Earlimart Rezone Project, and (3) the Existing UDB Project. The County is proposing six (6) land use and zoning districts, including a Mixed Use zone. Also in the process is an update to the Zoning Code to include a mixed use zoning district in compliance with the mixed use designation in the 2030 General Plan. The Community Plan Update is intended to serve residents and business owners in the Project Area by providing necessary public improvements, encouraging rehabilitation and repair of deteriorating infrastructure and fostering economic development of the Project Area.

- **Traver Community Plan:** Status – GPA approved. On December 16, 2014 the Tulare County Board of Supervisors (BOS) approved an update to the Traver Community Plan. The Traver Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- **Ducor:** Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Ducor Community Plan. The Ducor Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- **Terra Bella:** Status – GPA approved. On November 3, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Terra Bella Community Plan. The Terra Bella Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- **Pixley:** Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Pixley Community Plan. The Pixley Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- **Tipton:** Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved the Tipton Community Plan. The Tipton Community Plan is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

- **Strathmore:** Status – GPA approved. On June 17, 2015 the Tulare County Board of Supervisors (BOS) approved an update to the Strathmore Community Plan. The Strathmore Community Plan Update is consistent with the recent approval of the General Plan 2030 Update, and will include the following primary goals and objectives.

In addition to the Major Projects outlined in the Tulare County General Plan Update 2030 Recirculated Draft EIR, the approved projects listed as follows may produce cumulative impacts:

- **Pena's:** The project is for Peña's Material Recovery Facility (MRF) and Transfer Station (TS)' which currently sits on 18.01 acres that are being rezoned from AE 30 to M1 Light Industrial Zoning, and rezoning 6.7 acres and 11.3 acres from residential and industrial reserve zoning to industrial zoning. The land is currently operated by Peña's Disposal,

Inc. and has a previously permitted peak processing capacity of 500 tons per day (TPD). This existing facility serves the unincorporated northern portions of Tulare County and the unincorporated southern portions of Fresno County, and the City of Orange Cove in Fresno County. Within the County of Tulare, the facility serves the cities of Dinuba and Porterville, the communities of Cutler, Orosi, London, Sultana, Traver, Seville and other smaller communities in the area that may need to utilize the facility for the recycling of source-separated recyclables, commingled recyclables, commercial and industrial rubbish, green material and wood wastes, construction and demolition wastes, and inert debris to assist in reaching the diversion goals of the California Integrated Waste Management Act of 1989 (AB 939).

- **South County Correctional Detention Facility in Porterville:** The project will require a rezoning of the project site, which is half in the County and half in the City of Porterville. The proposed project contains a build-out "footprint" for the proposed facility of approximately 15.0 acres with a new maximum security Type II facility as the primary structure. The project will consist of 250-cell double occupancy units (500 beds) and 14 special use beds for a total of 514 beds. In addition to the main detention facility, the project will also include support service components.

  As the site is currently under agricultural production, the project will require new utilities infrastructure (such as electrical, gas, phone, etc.). It will also require streets/roads improvements, potable water systems, wastewater systems, and storm water drainage infrastructure. These will be constructed or expanded to meet facility demands. Where feasible, the project will be extended to connect with existing potable water, wastewater, and storm water drainage infrastructure provided by City of Porterville. However, possible new construction of the above mentioned infrastructure may be necessary, and as such, will be evaluated.

- **Pixley Biogas:** The project is for development of a biogas facility on 2.75 acre portion of an 8 acre parcel. The digester will extract methane gas, via an anaerobic manure digester. The facility will be used to produce 266 MMBTUS per day of biogas via an anaerobic digestion of manure feedstock from nearby dairies. The biogas produced will be used to fuel the Calgren bio-refinery facility, located adjacent and to the south of the project site, which will reduce the Calgren plant consumption of natural gas.

- **Harvest Power:** The project is for a Composting Expansion and Anaerobic Digester. The project will allow a maximum total tonnage for the composting to increase from 156,000 tons per year to a potential 216,000 tons per year. An additional 60,000 tons will be allowed at the proposed anaerobic digester facility. The facility will produce transportation fuel through a compressed natural gas (CNG) refueling station.

- **Orosi Rock:** The project includes concrete a recycling and surface mining operation on 35.13 acres where concrete from various construction projects around the region are delivered for recycling. The project includes transporting up to 800,000 tons of aggregate via 44,000 trips per year heavy-duty truck trips from the operation on an annual basis.

The amendment to the previous permit allows an increase of 1.9 million tons of rock and 2.1 million tons of imported recycled concrete. The total production of aggregate will be 10.8 million tons over the course of the existing 25 year period of the existing permit. Excavating will be limited to 400' Mean Sea Level (MSL) and the operation will continue blasting by a licensed blaster to break up larger rocks that cannot be moved or broken up by mechanical equipment.

- **Tulare Solar Center:** The project includes the construction of an 80 MW solar photovoltaic facility on up to 800 acres of an approximately 1,144 acre property historically used as agricultural farmland in Tulare County, California. Proposed Project construction generally requires a focus in three major areas. The areas of focus include: (1) The solar field with associated equipment, including solar PV panels/modules, racking systems, inverters, intermediate voltage transformers, access roads, and underground, above-ground, or overhead electrical systems to collect and consolidate power from across the Project; (2) A substation(s) that receives the solar field's electrical production and increases the voltage to match the voltage of the adjacent utility grid via a generator step-up transformer(s), with Project owned gen-tie lines, and (3) Any other electrical interconnection components necessary for the Project's production to reach the utility grid, including disconnect equipment, communications lines (e.g. fiber optics) and a sub-transmission tap line.

- **Deer Creek Mine:** This is a Project amendment to a Surface Mining Permit and Reclamation Plan to allow expanded operations at this site. The Applicant currently operates a rock and gravel surface mining operation on 98 acres. The Project will result in no increase in the maximum depth of the mine, as expansion will occur laterally within the existing mining footprint. The approval includes an increase in production by 450,000 tons per year (from a maximum of 500,000 tons per year to a maximum of 950,000 tons per year). Increase truck hauling by 176 round trips per day (from a maximum of 200 round trips per day to a maximum of 376 round trips per day). The Project will not result in any change to the estimated total rock production of 15,000,000 tons of rock material during the estimated 50 years of operation nor would it result in any change to the approved reclamation plan.'

- **Papich:** The Applicant received a Special Use Permit through Tulare County for the following: 1) Permanent establishment of the asphalt batch plant on the existing site; 2) Expansion of the existing operation from 3,700 tons/day to 8,000 tons/day of asphalt; and 3) To conduct retail/commercial sales of asphalt.

- **Derrel's Mini Storage** –Project includes a proposed General Plan Amendment (No. GPA 14-007) and proposed Change of Zone (No. PZ 14-001). GPA 14-007 received approval to amend the Tulare County Land Use Element of the General Plan by changing the land use designation on the 19.33-acre parcel from "Agriculture" to "Commercial or Light Industrial". PZ 14-001 was approved to re-zone the AE-20 (Exclusive Agricultural-20 acre minimum) Zone to C-3 (Service Commercial) Zone on the same

19.33 acres. The zone change allows, as noted in the Tulare County Zoning Ordinance, Mini-Warehouses – "Storage or warehousing service within a building or buildings primarily for individuals to store personal effects"[5]

The site consists of the phased construction of 19.33 acre mini- storage facility. Phase 1 consists of 129,550 square feet; Phase 2 consists of 148,950 square feet, and Phase 3 consists of 96,600 square feet. RV storage will be used on the Phase 2 portion of the site, moving to Phase 3 as the earlier phases are constructed with the eventuality of the entire site constructed as mini storage units (if necessary) to meet market demands. It is possible that Phase 3 will remain as RV storage. The applicant approximates a ten year full build-out of the entire proposed Project site.

SUMMARY OF CUMULATIVE IMPACTS

In this summary section, mitigated impacts and immitigable impacts will be discussed. Checklist Item criteria that would result in No Impacts or Less Than Significant Impacts are discussed in Chapter 3 and are not reiterated here.

Unavoidable Impacts

There are no significant and unavoidable impacts. All potentially significant cumulative impacts have been reduced below a level of significance through mitigation.

Less than Significant Impacts with Mitigation

All impacts that can be effectively mitigated are listed in the **Table 4-2**.

Table 4-2
Checklist Items with Less Than Significant Impacts with Mitigation

Impact Section	Checklist Item No.	Checklist Criteria
Biology	3.4 a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game [Wildlife] or U.S. Fish and Wildlife Service?
Cultural Resources	3.5 a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?
Cultural Resources	3.5 b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?
Cultural Resources	3.5 c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

[5] Tulare County Zoning Ordinance. Page 13.

Table 4-2 Checklist Items with Less Than Significant Impacts with Mitigation		
Impact Section	**Checklist Item No.**	**Checklist Criteria**
Cultural Resources	3.5 d)	Disturb any human remains, including those interred outside of formal cemeteries?
Transportation & Traffic	3.16 e)	Result in inadequate emergency access"
Tribal Cultural Resources	3.16 a)	Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
Tribal Cultural Resources	3.16 b)	A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe?

See Chapter 8 Mitigation Monitoring and Reporting Program for a comprehensive list of Mitigation Measures to be implemented as part of the proposed Project.

Less Than Significant Impact

All impacts that are Less Than Significant are listed in **Table 4-3**.

Table 4-3 Checklist Items with Less Than Significant Impacts		
Impact Section	**Checklist Item No.**	**Checklist Criteria**
Aesthetics	3.1 b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
Aesthetics	3.1 c)	Substantially degrade the existing visual character or quality of the site and its surroundings
Air Quality	3.3 a)	Would the project conflict with or obstruct implementation of the applicable air quality plan?
Air Quality	3.3 b)	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Air Quality	3.3 c)	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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?
Air Quality	3.3 d)	Expose sensitive receptors to substantial pollutant concentrations?

Table 4-3
Checklist Items with Less Than Significant Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Air Quality	3.3 e)	Create objectionable odors affecting a substantial number of people?
Biological Resources	3.4 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?
Geology & Soils	3.6 a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?
Geology & Soils	3.6 b)	Result in substantial soil erosion or the loss of topsoil?
Geology & Soils	3.6 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?
Geology & Soils	3.6 d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
Greenhouse Gas Emissions	3.7 a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
Hazards & Hazardous Materials	3.8 a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Hazards & Hazardous Materials	3.8 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?
Hazards & Hazardous Materials	3.8 c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
Hydrology & Water Quality	3.9 a)	Violate any water quality standards or waste discharge requirements?

Table 4-3
Checklist Items with Less Than Significant Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Hydrology & Water Quality	3.9 b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
Hydrology & Water Quality	3.9 h)	Place within a 100-year flood hazard structures which will impede or redirect flood flows.
Noise	3.12 a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
Noise	3.12 b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?
Noise	3.12 c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?
Noise	3.12 d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?
Population & Housing	3.13 a)	Induce substantial 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)?
Public Services	3.14 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?**
Public Services	3.14 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: **Police protection?**

Table 4-3 Checklist Items with Less Than Significant Impacts		
Impact Section	**Checklist Item No.**	**Checklist Criteria**
Transportation & Traffic	3.16 b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
Utilities	3.17 a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
Utilities	3.17 b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Utilities	3.17 c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
Utilities	3.17 d)	Have sufficient water supplies available to serve the project been identified from existing entitlements and resources, or are new or expanded entitlements needed?
Utilities	3.17 e)	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?
Utilities	3.17 f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

No Impact

Checklist Items with No Impacts are listed in **Table 4-4**.

Table 4-4 Checklist Items with No Impacts		
Impact Section	**Checklist Item No.**	**Checklist Criteria**
Aesthetics	3.1 a)	Have a substantial adverse effect on a scenic vista?
Aesthetics	3.1 d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?
Agricultural Lands & Forestry	3.2 a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural uses?

Table 4-4
Checklist Items with No Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Agricultural Lands & Forestry	3.2 b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?
Agricultural Lands & Forestry	3.2 c)	Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code § 12220(q), timberland (as defined by Public Resources Code § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?
Agricultural Lands & Forestry	3.2 d)	Result in the loss of forest land or conversion of forest land to non-forest use?
Agricultural Lands & Forestry	3.2 e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of agricultural use or conversion of forest land to non-forest use?
Biological Resources	3.4 b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?
Biological Resources	3.4 c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
Biological Resources	3.4 e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
Biological Resources	3.4 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?
Geology & Soils	3.6 e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?
Greenhouse Gases	3.7 b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?
Hazards & Hazardous Materials	3.8 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?

Table 4-4
Checklist Items with No Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Hazards & Hazardous Materials	3.8 e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
Hazards & Hazardous Materials	3.8 f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
Hazards & Hazardous Materials	3.8 g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
Hazards & Hazardous Materials	3.8 i)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?
Hydrology & Water Quality	3.9 c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
Hydrology & Water Quality	3.9 d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Hydrology & Water Quality	3.9 e)	Create or contribute runoff water which will exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
Hydrology & Water Quality	3.9 f)	Otherwise substantially degrade water quality?
Hydrology & Water Quality	3.9 g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
Hydrology & Water Quality	3.9 i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
Hydrology & Water Quality	3.9 j)	Inundation by seiche, tsunami, or mudflow?
Land Use & Planning	3.10 a)	Physically divide an established community?
Land Use & Planning	3.10 b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Table 4-4
Checklist Items with No Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Land Use & Planning	3.10 c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?
Mineral Resources	3.11 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?
Mineral Resources	3.11 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?
Noise	3.12 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 expose people residing or working in the project area to excessive noise levels?
Noise	3.12 f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?
Land Use & Planning	3.13 a)	Physically divide an established community?
Land Use & Planning	3.13 b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
Land Use & Planning	3.13 c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?
Population & Housing	3.13 b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?
Population & Housing	3.13 c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?
Public Services	3.14 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: **Schools?**

Table 4-4
Checklist Items with No Impacts

Impact Section	Checklist Item No.	Checklist Criteria
Public Services	3.14 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: **Parks?**
Public Services	3.14 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: **Other Public Facilities?**
Recreation	3.15 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?
Recreation	3.15 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?
Transportation	3.16 a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeway**s**, pedestrian and bicycle paths, and mass transit?
Transportation	3.16 c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?
Transportation	3.16 d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
Transportation	3.16 f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?
Utilities	3.17 g)	Comply with federal, state, and local statutes and regulations related to solid waste?

REFERENCES

CEQA Guidelines, Sections 15130 (e) and 15355

Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report (RDEIR)

Tulare County Associated of Governments Blueprint 2050, Preferred Scenario (2009)

Chapter 5

Alternatives

INTRODUCTION

The following Alternatives analysis is based on the information contained in the "Traver Community Wastewater System Improvements Technical Memorandum" and its attachment "Attachment 1 – Plan of Study" (together referred to as "Report" or "Wastewater System Report") which is included as Appendix "D" of this DEIR.

CEQA Guidelines Section 15126.6 requires that a reasonable range of alternatives to the Preferred/Proposed Project be discussed in the EIR. Specific requirements include the following:

CEQA Guidelines §15126.6(a): Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. The Lead Agency is responsible for selecting a range of alternatives for examination and must publicly disclose its reasoning for selecting those alternatives.

CEQA Guidelines §15126.6 (b) Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

CEQA Guidelines §15126.6 (c) Selection of a range of reasonable alternatives. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Additional information explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.

CEQA Guidelines §15126.6(d) Evaluation of alternatives. The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental

effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

CEQA Guidelines §15126.6 (e) "No project" alternative.

(1) The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The no project alternative analysis is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline (see Section 15125).

(2) The "no project" analysis shall discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

(3) A discussion of the "no project" alternative will usually proceed along one of two lines:

(A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

(B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.

(C) After defining the no project alternative using one of these approaches, the lead agency should proceed to analyze the impacts of the no project alternative by projecting what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

CEQA Guidelines §15126.6(f): Rule of reason. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.

(1) Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

(2) Alternative locations.

(A) Key question. The key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.

(B) None feasible. If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location.

(C) Limited new analysis required. Where a previous document has sufficiently analyzed a range of reasonable alternative locations and environmental impacts for projects with the same basic purpose, the lead agency should review the previous document. The EIR may rely on the previous document to help it assess the feasibility of potential project alternatives to the extent the circumstances remain substantially the same as they relate to the alternative.

(3) An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative.

CEQA Guidelines Section 15021. Duty to minimize environmental damage and balance competing public objectives

(a) CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible.

(1) In regulating public or private activities, agencies are required to give major consideration to preventing environmental damage.

(2) A public agency should not approve a project as proposed if there are feasible alternatives or mitigation measures available that would substantially lessen any significant effects that the project would have on the environment.

(b) In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors.

(c) The duty to prevent or minimize environmental damage is implemented through the findings required by CEQA Guidelines Section 15091.

(d) CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors and in particular the goal of providing a decent home and satisfying living environment for every Californian. An agency shall prepare a statement of overriding considerations as described in Section 15093 to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment."[1]

FACTORS CONSIDERED IN ANALYSIS OF ALTERNATIVES

In this Alternatives analysis the following evaluation criteria will be used:

Evaluation Criteria 1: Project Specific Elements

The primary Project-specific elements include:

- Improve the existing wastewater treatment system to provide reliable wastewater removal and treatment services by providing an average daily flow of 0.2 million gallons per day;

- Reduce and/or remove the threat of potential groundwater contamination caused by seepage of wastewater from failing and improperly operating septic systems into the underground water supply in the Community and surrounding areas;

- Design and construct a wastewater system capable of adequately servicing the existing land uses and planned growth within the Traver Community Planning area; and

[1] CEQA Guidelines, Section 15021

- Operate and maintain a wastewater system as affordably and cost effectively as possible for the users of the system in the Community of Traver.

- Enhance Traver Community residents' quality of life.

Evaluation Criteria 2: Project Objectives

1. Improve the existing wastewater treatment system which would provide reliable on-site wastewater removal and treatment services for the Community of Traver; (provide an average daily flow of 0.2 million gallon per day (mgd) to meet the wastewater disposal requirements of the community);
2. Eventual abandonment of the existing individual residential on-site septic tank/leach line systems, as applicable, located within the Community of Traver;
3. Provide a system that has the least potential to result in environmental impacts and would provide an environmental benefit by eliminating wastewater discharge from on-site system tanks into the ground;
4. Treat collected wastewater so as to remove constituents, such as BOD, suspended solids, nitrogen, and waterborne bacteria and viruses, to a greater extent, thereby improving subsurface water quality in the receiving groundwater basin relative to current environmental conditions;
5. Provide the most cost-effective, safe, and reliable means to collect and treat wastewater to Title 22 standards; and
6. Implement an as affordable fees schedule to efficiently and effectively maintain and operate the wastewater system to enhance the quality of life for Traver residents.

Evaluation Criteria 3: Minimize Construction and Operations & Maintenance Costs

Although there may be a diversity of theoretical alternatives, there are only a few alternatives that could potentially be feasibly implemented due to cost prohibitive expenses involved in some alternatives. Considerable increases in costs can result in infeasibility of a project alternative.

The Project involves the improvement of the existing wastewater system for the Community of Traver that is recommended by the *Traver Community Wastewater System Improvements and its Attachment 1 – Plan of Study, Tulare County, June 09, 2017* (Report) to be the most financially and operationally feasible for the community (including both physical and governance operation and maintenance). Operational efficiency is a major concern in the long-term viability of the facility. Operational efficiency affects both operational costs and operational effectiveness through the minimization of new infrastructure and capital costs needed.

Evaluation Criteria 4: Lessen (Reduce) Significant Impacts

According to CEQA, a valid Project alternative should be capable of meeting most of the Project objectives *and* reducing potential significant impacts associated with the Project. Reasonable alternatives are those that may reduce the extent and magnitude of Project, site, and cumulative significant impacts.

Each alternative should be analyzed to assess the potential to reduce significant impacts. (On a cumulative basis, alternative sites generally require the construction of duplicate buildings. The creation of additional buildings requires the use of additional resources, which on a cumulative basis would increase impacts to the environment in general.)

Evaluation Criteria 5: Physical Feasibility (Land Size and Configuration Constraints)

Physical feasibility is required because if a site for a particular alternative is too small or if the components of the proposed Project cannot be configured on the site, then the alternative would not be feasible and should be eliminated from review.

ALTERNATIVES ANALYSIS

In accordance with CEQA Guidelines Section 15126.6, the following alternatives were selected to be evaluated against the proposed Project:

Alternative 1 – Sewer Force Main Collection System (with Biolac System at WWTP)
Alternative 2 – Connect to Selma-Kingsburg-Fowler Sanitation District
Alternative 3 – No Build / No Project

An alternative site was not chosen for evaluation for reasons identified in CEQA Guidelines §15126.6(f): Rule of reason. Because a WWTP already exists in Traver and is being proposed for expansion/improvement, it would not be practical to build an entirely new WWTP at a different location. In addition, an alternative site would likely result in greater environmental impacts in every environmental impact criteria listed in the CEQA Guidelines Appendix G checklist. Therefore, an alternative site was not evaluated.

Alternative 1: Sewer Force Main Collection System (With Biolac System at WWTP)

Description of the Sewer Force Main Collection System: The existing collection system would continue to serve existing customers; and the lift station and force main would serve new development. The lift station would be located near Burke Drive and Merritt Drive and pump through a 6-inch force main to the intersection of Road 44 and Merritt Drive. At that location, the sewage would discharge to a 12-inch gravity main and flow to the wastewater treatment plant (which would still need to be expanded). This alternative would also include extending sewer

mains north and south on Burke Drive, crossing the 99 Union Pacific Railroad and providing gravity mains north and south on Old State Highway [Sixth Street].[2]

"Though the lift station option would result in a lower initial capital cost, the cost of maintenance and possibility of Sanitary Sewer Overflows would increase dramatically. Operation and maintenance costs of a lift station would include power costs, fuel costs for an emergency standby generator, replacement costs for pumps, motors and generator, and most of all – cost of labor."[3]

Description of the Biolac System:

1. "The system would begin with construction of a redundant aeration pond. The new pond would be designed to be compatible with future treatment options, such as Biolac, but would not sue the same treatment process as the existing ponds for now. This pond would be for redundancy, and only two of the three treatment ponds at the WWTF[P] would be in use at a time. Expansion to double plant capacity could follow with additional ponds and Biolac treatment.
2. Improvements to the lift station, including level controls, check valve replacement and conduit replacement.
3. Additional aerators in the existing aerated ponds.
4. Installation of cleanouts in the pipelines from the headworks to the aerated ponds.
5. Construction of self-cleaning screen for the headworks, which may require a new structure and/or reliable water supply.
6. Electrical improvements to provide for the additional aerators and/or headworks screen.
7. Two groundwater monitoring wells and a standby generator are recommended."[4]

The Biolac treatment system is effective for removal of nitrogen, but is less effective in treating other constituents that may existing at Traver. It is also somewhat difficult to operate and maintain by comparison to the package plant.[5]

[22] Traver Community Wastewater Systems Improvements – Technical Memorandum (2016), Page 2-3.
[3] Traver Community Wastewater Systems Improvements – Plan of Study (2017), Page 3-3.
[4] Traver Community Wastewater Systems Improvement – Plan of Study (2017), Page 3-4.
[5] Ibid. Page 3-5.

Alternative No. 1 Advantages and Disadvantages	
Advantages	**Disadvantages**
Biolac system is effective for removal of nitrogen.[6]	Higher O&M costs associated with sewer force main alternative than proposed Project.[7]
Lower initial capital cost for the sewer force main alternative than proposed gravity system.[8]	Greater risk of Sanitary Sewer Overflows than proposed Project that would be reportable to the Regional Board.[9]
	Biolac system is somewhat difficult to operate and maintain compared to the proposed Project.[10]

Alternative 2: Connect to Selma-Kingsburg-Fowler Sanitation District

Description: This alternative consists of connecting to the Selma-Kingsburg-Fowler (SKF) Sanitation District facilities. At a minimum, this would entail construction of a new pipeline from Traver to the nearest SKF pipeline (near Kingsburg). However, in order to also serve potential new residential, commercial and/or industrial development in the area, this alternative would still require a new sewer collection system in Traver to serve future new development and existing clients who are still on individual septic systems.

The nearest SKF pipeline is at the southern edge of Kingsburg along the Tulare/Fresno County line. In selecting a proposed pipeline route, the preference is to create as minimal impacts and disruption to existing land owners and the environment as possible while still minimizing costs. Any pipeline route will be required to cross the Kings River. For purposes of this alternative, the two "clearest" routes available for a new pipeline to connect Traver to SKF appear to be: (1) Adjacent to the railroad line that runs adjacent to State Route (SR) 99. The pipeline would run from Avenue 368 / Burke Drive in Traver up to approximately Avenue 392 south of Kingsburg. This would entail going crossing the Kings River on the existing bridge where the railroad and SR 99 cross the river. This option could require acquisition of land from landowners on the east side of the railroad and/or potentially an easement from the railroad or Caltrans on the bridges over the Kings River. Or, (2) From Avenue 368/Road 36 in Traver within the road right-of-way or adjacent lands north along Road 36 to Avenue 390, then west on Avenue 390 to the railroad, and then northwest adjacent to the railroad on the bridge over the Kings River up to approximately Avenue 392 south of Kingsburg. This option could require acquisition of land from landowners along Road 39 and Avenue 390 and/or potentially an easement from the railroad or Caltrans on the bridges over Kings River and on land up to Avenue 392.

The components of this alternative are estimated to be:

- Construction of
  - approximately 5 miles of new pipeline

[6] Ibid.
[7] Traver Community Wastewater System Improvement – Technical Memorandum (2017), Page 2-3.
[8] Ibid, Page 2-3.
[9] Ibid, Page 4-4.
[10] Traver Community Wastewater System Improvement – Plan of Study (2017), Page 3-5.

  - new gravity wastewater collection system throughout the Traver (also a component of the proposed Project)
  - one or more lift stations along the pipeline, including new points of electric service
  - sewer laterals from each property, with connection to each existing residence (also a component of the proposed Project)
- Preparation of a feasibility study to determine the ability of SKF to accept wastewater and of the pipeline route
- Annexation into the SKF Sphere of Influence (an possibly an extraterritorial agreement)
  - Establishment of fees for use of SKF facilities
- Abandon (including remediation of) the existing Traver WWTP
- Potential acquisition of land and/or easements to allow for new pipeline
- On-going Operations & Maintenance costs of maintaining the pipeline

Alternative No. 2 Advantages and Disadvantages	
Advantages	**Disadvantages**
Wastewater treatment becomes the responsibility of an outside entity.	High initial capital costs to construct 5 miles of pipeline and potentially acquire land.
O&M costs are limited to the collection system and pipeline only.	Potential reluctance of SKF to provide wastewater service in this area.
	The local community may have little input into the ongoing operation of the system and perceive loss of control.
	Must abandon existing Traver WWTP
	Potential adverse impacts to air quality, agricultural, biological, greenhouse gases , geology and soils, hazards and hazardous materials, noise, and traffic resources.

Alternative 3: No Build / No Project

Description: This alternative would entail no new sewer collection system and no improvements to the existing WWTP, and wastewater collection and treatment would occur as-is. As existing septic systems fail, they would either remain in use after failure or be replaced with similar systems, which would continue to impact the groundwater quality in the area. Future new development in the area would be required to construct septic systems or other on-site wastewater systems because the existing WWTP would not be improved and thus would not be able to accept any additional wastewater. In addition, future violations of the WDR would likely occur because of anticipated new stricter RWQCB rules and regulations.

There are no capital or periodic O&M or replacement costs associated with this alternative. However, individual homeowners will be faced with replacing existing septic systems at some point, at a cost of thousands of dollars per household. New, planned and proposed development would likely be hindered because of lack of wastewater treatment capacity.

Alternative No. 3 Advantages and Disadvantages	
Advantages	**Disadvantages**
No immediate capital expenditure required.	Not a solution to the wastewater problems within the community.
	Existing septic systems within the community will continue to degrade and fail, and the cost of the replacement would be entirely borne by the homeowner.
	As septic systems continue to fail, potential public health effects may increase.
	Degradation of the shallow groundwater table will continue.
	New planned and proposed development would be hindered because of lack of wastewater treatment capacity.

Evaluation of Alternatives: Alternative 3 (No Project) is not considered a viable Alternative as it does not accomplish the main goal of the Project, which is to provide a sustainable solution for the wastewater disposal in the community and to foster new development. Factors considered in the comparisons of Alternatives 1 and 2 are limited to costs analysis, construction challenges, and critical concerns. Environmental considerations for CEQA purposes are discussed in the next section of this chapter.

In summary, the proposed Project (discussed in detail in Chapter Two) is estimated to be the lowest cost alternative (considering up-front capital costs and on-going O&M costs), has the least anticipated construction challenges, and has the fewest critical issues when compared to the Alternatives. The proposed Project is preferred over the alternatives for the following reasons:

- The proposed Project capitalizes on the economies of scale associated with an expandable WWTP that can expand based on growth in local development.
- Protection of the groundwater supplies is paramount, continued operation of septic systems would continue to endanger groundwater quality;
- The proposed Project is the most viable from technical, fiscal, managerial and regulatory perspectives; and
- The proposed Project provides the most favorable combination of capital costs, on-going O&M costs, protection of groundwater, and ability to serve future new development.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 (e)(2) requires that the environmentally superior alternative be identified. If the environmentally superior alternative is the No Project Alternative, the EIR shall identify an environmentally superior alternative among the other alternatives.

The following analyses evaluates Alternatives 1, 2, and 3 against the proposed Project in order to identify the environmentally superior alternative. The relative environmental impacts associated with each of the Alternatives, as compared to the proposed Project, are summarized in **Table 5-1**. A matrix comparing the Evaluation Criteria as they pertain to each Alternative is provided in **Table 5-2**.

Alternative 1 - Sewer Force Main Collection System (With Biolac System at WWTP). The environmental impacts associated with this alternative would be similar to the proposed Project because they both entail a sewer collection system and improvement to the existing WWTP. However, this alternative would likely result in more frequent Sanitary Sewer Overflows which could impact local health safety and contaminate ground water. On-going O&M costs are also higher than the proposed Project. As such, Alternative 1 is not superior to the proposed Project and is not considered a viable alternative.

Alternative 2: – Connect to Selma-Kingsburg-Fowler Sanitation District. This alternative could potentially meet all of the Project objectives, but would not attain all the Alternatives Evaluation Criteria, in particular, providing a system as affordable as possible for the community with the least environmental impact. As a low-income community, the residents would not likely have the resources to afford paying through user fees for the amortized costs of a constructing approximately 5 miles of new pipeline in addition to potential land acquisition fees, on-going O&M costs of the pipeline, and fees to SKF for wastewater treatment services. Further, this Alternative would result in more significant impacts to air quality, agricultural, biological, cultural, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, and traffic resources compared to the proposed Project resulting from development of the new pipeline. Therefore, this Alternative would not meet the criteria as the Environmentally Superior Alternative.

Alternative 3 – No Build / No Project Alternative. The No Project Alternative would avoid all potential construction- and operations-related impacts related to air quality, biological resources, cultural resources, greenhouse gas emissions, noise and traffic resulting from the proposed Project and each of the other Alternatives identified earlier. However, the No Project Alternative would not meet the Evaluation Criteria of eliminating the potentially significant public health-related impacts the community is currently experiencing. Therefore, the consideration of the No Project alternative being the environmentally superior alternative would require the judgment of whether in balance, eliminating or avoiding certain impacts is of greater benefit environmentally than avoiding certain other impacts. The No Project Alternative, while avoiding most impacts related to the physical environment resulting from the Project, would not avoid, resolve, or remedy the existing or future potential impacts related to human health from unsanitary conditions and/or water quality contamination by the continued use of individual septic tanks and leach fields. It would also not allow for potential future development in Traver. Therefore, this Alternative would not meet the criteria as the Environmentally Superior Alternative.

Environmental impacts associated with each of the alternatives presented compared to the proposed Project are shown in **Table 5-1**.

Table 5-1 Impacts of Alternatives Compared to the Proposed Project (Gravity sewer collection / Package Treatment Plant upgrades)			
Impact Topic	**Alternative 1 Force Main / Biolac**	**Alternative 2 Connect to SKF**	**Alternative 3 No Project**
Aesthetics	similar	**similar-greater**	less
Agriculture	similar	**greater**	less
Air Quality	similar	**greater**	less
Biology	similar	**greater**	less
Cultural	similar	**greater**	less
Geology/Soils	similar	similar	less
Greenhouse Gases	similar	**greater**	less
Hazards & Hazardous Materials	similar	similar	less
Hydrology/Water Quality	**similar - greater**	similar	**greater**
Land Use	similar	**greater**	less
Mineral Resources	similar	similar	less
Noise	similar	**greater**	less
Population/Housing	similar	similar	less
Public Services	similar	similar	less
Recreation	similar	similar	similar
Transportation and Traffic	similar	similar	less
Utilities	similar	similar	less
Mandatory Findings	similar	**greater**	less

Table 5-2 is a matrix comparing each Alternative's and the proposed Project's abilities to achieve the Evaluation Criteria.

Table 5-2 Comparison of Alternatives Attaining Evaluation Criteria				
Evaluation Criteria	Proposed Project	Alternative 1 Force Main / Biolac	Alternative 2 Connect to SKF	Alternative 3 No Project
Project Specific Elements	Yes	Yes	Yes	No
Meet all Project Objectives	Yes	Yes	Yes	No
O & M and Cost Efficiency	Yes	No	No	Yes & No
Reduce Significant Impacts	Yes	Yes	No	Yes & No
Physical Feasibility	Yes	Yes	Yes	Yes

As discussed in Alternatives 1 through 3, each of the Alternatives could result in more adverse environmental impacts as specified on the CEQA resources checklist. Therefore, the proposed Project is the environmentally superior alternative.

In summary, based upon the above analyses, the proposed Project is the Environmentally Superior Alternative and would result in less, or the avoidance of, significant environmental impacts compared to the other identified Alternatives and would satisfy all the Evaluation Criteria noted earlier.

REFERENCES

See References cited in Chapter 3-2 Air Quality

See References cited in Chapter 3-4 Biology

See References cited in Chapter 3-5 Cultural

See References cited in Chapter 3-7 Greenhouse Gases

See References cited in Chapter 3-12 Noise

AECOM. *Traver Community Wastewater System Improvements* and its attachments *Technical Memorandum* and *Plan of Study*. June 09, 2017. (Included as Appendix "D" of this DEIR)

Chapter 6
Economic, Social, and Growth-Inducing Effects

INTRODUCTION

This chapter discusses economic, social, and growth-inducing effects of the Project. Table 6-1 provides the CEQA requirements and a summary of the impact analysis.

Table 6-1
Summary of Economic, Social and Growth Inducing Impacts

Topic	Summary of Impact	CEQA Requirement
Economic Impact	The proposed Project may result in adverse financial impacts to the community. The Project may result in off-setting benefits for improved quality of life related to public health and property values to the community and immediate vicinity.	CEQA does not have specific requirements for evaluating the economic impacts of a Project. Section 15131 of CEQA Guidelines states that "Economic or social information may be included in an EIR or may be presented in whatever form the agency desires."
Social Impact	The proposed Project would not result in disproportionate environmental effects on minority populations, low income populations, or Native Americans. The proposed Project does not pose any adverse environmental justice issues that would require mitigation. The project would improve the quality of life for the community.	The social impacts of a project include environmental justice considerations. California Government Code Section 65040.12 defines Environmental Justice as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies."
Growth Inducing Effect	The proposed Project would not result in significant growth inducing impacts. The Project will serve the existing population as well as the population planned for in the Traver Community Plan. Growth inducing impacts would be less than significant.	CEQA Guidelines Section 15126 (d) makes recommendations for analyzing impacts due to growth inducement, including discussing ways in which the project could foster economic or population growth, the construction of additional housing, or other factors which could remove obstacles to population growth or encourage and facilitate other activities which could impact the environment individually or cumulatively.

Based on the information provided in **Table 6-1**, implementation of the proposed Project would result in ***Less Than Significant*** environmental impacts, either individually or cumulatively, caused by either economic, social, or growth-inducing effects. No mitigation measures are required.

DEMOGRAPHICS

"Tulare County has one of the highest rates of unemployment in California and the nation, due in large part to the seasonal nature of agricultural employment. "The unemployment rate in the Tulare County was 13.4 percent in February 2015, down from a revised 13.8 percent in January 2015, and below the year-ago estimate of 15.5 percent. This compares with an unadjusted unemployment rate of 6.8 percent for California and 5.8 percent for the nation during the same period."[1] The general demographic information can be found in **Table 6-2**.

Table 6-2
Profile of General Population and Housing Characteristics - 2010[2]

Demographic Profile Data	Tulare County
Population	
Total	442,179
% Hispanic or Latino	60.6%
% not Hispanic or Latino	39.4%
White alone	27.5%
Black or African American alone	0.4%
Asian alone	0.2%
Some other race alone	0.1%
Two or more races	1.4%
Housing	
Total housing units	141,696
Occupied Housing Units	130,352
Vacant housing units	11,344
Owner-occupied housing units	76,586 (58.8%)
Renter-occupied housing units	53,766 (41.2%)
Homeowner vacancy rate (%)	2.4%
Renter vacancy rate (%)	5.8%

[1] State of California Employment Development Department, Labor Market Information. http://www.labormarketinfo.edd.ca.gov/. Accessed September 2017.
[2] U.S. Census Bureau, 2010 Demographic Profile Data http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml. Accessed September 2017.

ECONOMIC EFFECTS

Section 15131 of the CEQA Guidelines states:

"Economic or social information may be included in an EIR or may be presented in whatever form the agency desires.

(a) Economic or social effects of a project shall not be treated as significant effects on the environment. But rather, an EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by the economic or social changes. The intermediate economic or social changes need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis shall be on the physical changes.

(b) Economic or social effects of a project may be used to determine the significance of physical changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant. As an additional example, if the construction of a road and the resulting increase in noise in an area disturbed existing religious practices in the area, the disturbance of the religious practices could be used to determine that the construction and use of the road and the resulting noise would be significant effects on the environment. The religious practices would need to be analyzed only to the extent to show that the increase in traffic and noise would conflict with the religious practices. Where an EIR uses economic or social effects to determine that a physical change is significant, the EIR shall explain the reason for determining that the effect is significant.

(c) Economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR. If information on these factors is not contained in the EIR, the information must be added to the record in some other manner to allow the agency to consider the factors in reaching a decision on the project."[3]

Some benefits would accrue directly to the general Tulare County economy from this project related to initial expenditures for local labor force, potential purchase of construction and infrastructure materials from local vendors, and possible rental of construction equipment. Also, these economic benefits can have beneficial secondary or "multiplier effects" which refers to the extent to which a Project could indirectly cause increased activity elsewhere in the local or regional economy from the initial local expenditures.

[3] CEQA Guidelines Section 15131.

Also, as indicated in Chapter 3.17 Utilities, potential contamination of the Community of Travers existing groundwater quality (from effluent and high nitrates from septic systems), potential for vectors and disease from exposure to the raw sanitary waste, and the general health and safety of the community's population are some of the adverse environmental impacts which could occur if the Project is not implemented. Because the residents of Traver are generally low-income, the cost and frequency of maintenance and up-keep can be costly relative to the resident's income. Without the Project, additional expenses could be incurred by Traver residents to remedy the adverse impacts of a failing septic/leach field system.

SOCIAL EFFECTS

Environmental Justice

"The basis for environmental justice lies in the Equal Protection Clause of the U.S. Constitution. The Fourteenth Amendment expressly provides that the states may not "deny to any person within [their] jurisdiction the equal protection of the laws" (U.S. Constitution, amend. XIV, Section1).

On February 11, 1994, President Clinton signed Executive Order (E.O.) 12898, titled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The executive order followed a 1992 report by the U.S. Environmental Protection Agency (U.S. EPA) indicating that "[r]acial minority and low-income populations experience higher than average exposures to selected air pollutants, hazardous waste facilities, and other forms of environmental pollution." Among other things, E.O. 12898 directed federal agencies to incorporate environmental justice into their missions."[4]

As evidenced by the analysis in Chapter 3.14, Population and Housing, the proposed Project is generally within the established unincorporated community of Traver. Land uses are predominantly residential, with commercial and religious uses within the community; agriculture and scattered rural residences are within the surrounding area. The proposed Project would take place within and outside Traver, a generally disadvantaged unincorporated. Although the EIR identifies some potentially significant impacts that could result from the proposed Project, the EIR also indicates they can all be reduced or avoided through the adoption and implementation of project design features and feasible and reasonable Mitigation Measures. The replacement of old, sometimes improperly maintained (and occasionally failing) septic tank/leach line systems with a centralized sanitary wastewater collection, treatment and disposal system would also result in health benefits to the community and benefits from avoiding potential further groundwater contamination.

[4] State of California, General Plan Guidelines 2003. Page 22, http://opr.ca.gov/docs/General_Plan_Guidelines_2003.pdf. Accessed September 2017.

GROWTH-INDUCING EFFECTS

As outlined in the CEQA Guidelines Section 15126 (d), growth-inducing impact of the proposed Project should be addressed.

The proposed Project would result in infrastructure improvements to the Community of Travers existing WWTP and associated sewer collection system. A new sewer main would be constructed and the existing treatment process would be improved. Pipelines would be sized as appropriate to serve existing development, to meet potential infill within Traver, and to accommodate the growth outlined and described in the adopted Traver Community Plan 2014 Update.

Based on the facts provided earlier, the proposed Project would not be growth-inducing. Consequently, there would be ***No Growth-Inducing Impacts*** as a result of constructing the Project.

REFERENCES

2015 Tulare County Housing Element Update, Adopted November 17, 2015; Certified by State of California Department of Housing and Community Development on December 9, 2015.

CEQA Guidelines

State of California, General Plan Guidelines 2003, which can be accessed at http://opr.ca.gov/docs/General_Plan_Guidelines_2003.pdf

Tulare County General Plan 2030 Update and Final EIR adopted by the Board of Supervisors, August 28, 2012, Resolution No. 2012-0699.

Traver Community Plan 2014 Update. Adopted by the Board of Supervisors December 16, 2014. Resolution No. 2014-0898.

2010 United States Census.

Chapter 7

UNMITIGABLE IMPACTS

NO ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

Under CEQA Guidelines §15126.2 (b), "[w]here there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."[1] This analysis should include a description of any significant impacts, including those which can be mitigated but not reduced to a level of insignificance.

The proposed Project will not result in any significant and unavoidable impacts. All impacts have been found to be Less Than Significant, or have been mitigated to a level considered Less Than Significant.

NO IRREVERSIBLE IMPACTS

Under CEQA Guidelines §15126.2 (c), "[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. (See Public Resources Code section 21100.1 and Title 14, California Code of Regulations, section 15127 for limitations to applicability of this requirement.)"[2]

The resources committed to the proposed Project are standard resources necessary for the construction and operation a wastewater collection system and main line (including lift stations and other appurtenances). Potential impacts would occur during the construction-related phase and minimal, if any, would occur during operations of the wastewater collection system and mainline. As noted in applicable resource sections, the proposed Project would be required to comply with local, state, and federal permitting requirements and operational practices, including air quality and greenhouse gas emission reductions (for example, through conservation of electricity and water), the proposed Project would not result in any irreversible life-cycle costs. The proposed Project will be in compliance with the goals of AB32 and the Climate Change Scoping Plan that outlines GHG reductions to 1990 levels.

[1] CEQA Guidelines, Section 15126.2 (b)
[2] Ibid. 15126.2 (c)

As contained in CEQA Guidelines §15043, "[a] public agency may approve a project even though the project would cause a significant effect on the environment, if the agency makes a fully informed and publicly disclosed decision that:

(a) There is no feasible way to lessen or avoid the significant effect (see Section 15091); and

(b) Specifically identified expected benefits from the project outweigh the policy of reducing or avoiding significant environmental impacts of the project. (see Section 15093)"[3]

When approving a project pursuant to § 15043, an agency must prepare a statement of overriding considerations. As noted in CEQA Guidelines § 15093, "CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered acceptable."[4]

"When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record."[5]

"If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091."[6]

NO STATEMENT OF OVERRIDING CONSIDERATIONS

Based on the analysis contained in this Draft EIR, there are no environmental impacts that cannot be avoided and there are no irreversible impacts; therefore, a Statement of Overriding Considerations is not necessary. Furthermore, the Project's merits and objectives are discussed in the Project Description (Chapter 2) and are found to be consistent with the intent of Tulare County General Plan 2030 Update.

PROJECT OBJECTIVES AND BENEFIT STATEMENTS

The following objectives are desirable if the Project is constructed as presented in the "Project Description".

[3] CEQA Guidelines, Section 15043
[4] Ibid. 15093 (a)
[5] Ibid. 15093 (b)
[6] Ibid. 15093 (c)

Objective 1: Connection to the existing Traver wastewater treatment facility

Benefit: Improve the existing wastewater treatment system which would provide reliable on-site wastewater removal and treatment services for the Community of Traver; (provide an average daily flow of 0.2 million gallon per day (mgd) to meet the wastewater disposal requirements of the community.).

Objective 2: Abandonment of on-site septic tank/leach line systems

Benefit: Eventual abandonment, as applicable, of the existing individual residential on-site septic tank/leach line systems located within the Community of Traver.

Objective 3: Beneficial Environmental Impacts

Benefit: Provide a system that has the least potential to result in adverse environmental impacts and would provide an environmental benefit by eliminating wastewater discharge from on-site system tanks into the ground.

Objective 4: Protect groundwater supply

Benefit: Treat collected wastewater so as to remove constituents, such as BOD, suspended solids, nitrogen, and waterborne bacteria and viruses, to a greater extent, thereby improving subsurface water quality in the receiving groundwater basin relative to current environmental conditions.

Objective 5: Cost-Efficiency

Benefit: Provide the most cost-effective, safe, and reliable means to collect and treat wastewater to Title 22 standards.

Objective 6: Affordable and Effective

Benefit: Maintain an as affordable fees schedule to efficiently and effectively maintain and operate the wastewater system to enhance the quality of life for Traver residents.

Following are the one hundred fourteen (114) General Plan Policies as they apply to each specific Resource contained in the CEQA Checklist and discussed in Chapter 3 of this document for the Program.

I. AESTHETICS – 1 Policies

SL-1.2 Working Landscapes - The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:

1. Referencing traditional agricultural building forms and materials,
2. Screening and breaking up parking and paving with landscaping, and
3. Minimizing light pollution and bright signage.

II. AGRICULTURAL LANDS AND FORESTRY RESOURCES – 6 Policies

AG-1.1 Primary Land Use - The County shall maintain agriculture as the primary land use in the valley region of the County, not only in recognition of the economic importance of agriculture, but also in terms of agriculture's real contribution to the conservation of open space and natural resources.

AG-1.3 Williamson Act - The County should promote the use of the California Land Conservation Act (Williamson Act) on all agricultural lands throughout the County located outside established UDBs. However, this policy carries with it a caveat that support for the Williamson Act as a tax reduction component is premised on continued funding of the State subvention program that offsets the loss of property taxes.

AG-1.5 Substandard Williamson Act Parcels - The County may work to remove parcels that are less than 10 acres in Prime Farmland and less than 40 Acres in Non-Prime Farmland from Williamson Act Contracts (Williamson Act key term for Prime/Non-Prime).

AG-1.6 Conservation Easements - The County shall consider developing an Agricultural Conservation Easement Program (ACEP) to help protect and preserve agricultural lands (including "Important Farmlands"), as defined in this Element. This program may require payment of an in-lieu fee sufficient to purchase a farmland conservation easement, farmland deed restriction, or other farmland conservation mechanism as a condition of approval for conservation of important agricultural land to non-agricultural use. If available, the ACEP shall be used for replacement lands determined to be of statewide significance (Prime or other Important Farmlands), or sensitive and necessary for the preservation of agricultural land, including land that may be a part of a community separator as part of a comprehensive program to establish community separators. The in-lieu fee or other conservation mechanism shall recognize the importance of land value and shall require equivalent mitigation.

AG-1.7 Preservation of Agricultural Lands - The County shall promote the preservation of its agricultural economic base and open space resources through the implementation of

resource management programs such as the Williamson Act, Rural Valley Lands Plan, Foothill Growth Management Plan or similar types of strategies and the identification of growth boundaries for all urban areas located in the County.

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

III. AIR QUALITY – 6 Policies

AQ-1.1 Cooperation with Other Agencies - 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 Air District, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.

AQ-1.2 Cooperation with Local Jurisdictions - The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional transportation and air quality issues.

AQ-1.3 Cumulative Air Quality Impacts - 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 Air Quality Land Use Compatibility - 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-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the AIR DISTRICT, under AB 32 (Health and Safety Code Section38501 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 determine its consistency with the emission reduction strategies.

IV. BIOLOGICAL RESOURCES – 5 Policies

ERM-1.1 Protection of Rare and Endangered Species - 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.

ERM-1.2 Development in Environmentally Sensitive Areas - 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.

ERM-1.4 Protect Riparian Areas - The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.16 Cooperate with Wildlife Agencies - The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

ERM-2.7 Minimize Adverse Impacts - The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

V. CULTURAL RESOURCES – 5 Policies

ERM-6.1 Evaluation of Cultural and Archaeological Resources - 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 Protection of Resources with Potential State or Federal Designations - 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-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

VI. GEOLOGY AND SOILS – 11 Policies

HS-1.2 Development Constraints - The County shall permit development only in areas where the potential danger to the health and safety of people and property can be mitigated to an acceptable level.

HS-1.3 Hazardous Lands - The County shall designate areas with a potential for significant hazardous conditions for open space, agriculture, and other appropriate low intensity uses.

HS-1.5 Hazard Awareness and Public Education - The County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures.

HS-1.11 Site Investigations - The County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding.

HS-2.1 Continued Evaluation of Earthquake Risks - The County shall continue to evaluate areas to determine levels of earthquake risk.

HS-2.4 Structure Siting - The County shall permit development on soils sensitive to seismic activity permitted only after adequate site analysis, including appropriate siting, design of structure, and foundation integrity.

HS-2.7 Subsidence - The County shall confirm that development is not located in any known areas of active subsidence. If urban development may be located in such an area, a special safety study will be prepared and needed safety measures implemented. The County shall also request that developments provide evidence that its long-term use of ground water resources, where applicable, will not result in notable subsidence attributed to the new extraction of groundwater resources for use by the development.

HS-2.8 Alquist-Priolo Act Compliance - The County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones (pursuant to and as determined by the Alquist-Priolo Earthquake Fault Zoning Act; Public Resource code, Chapter 7.5) unless the specific provision of the Act and Title 14 of the California Code of Regulations have been satisfied.

WR-2.2 NPDES Enforcement - 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 Best Management Practices - 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.

WR-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

VII. GREENHOUSE GAS EMISSIONS – 6 Policies

AQ-1.3 Cumulative Air Quality Impacts - 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 Air Quality Land Use Compatibility - 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-1.5 California Environmental Quality Act (CEQA) Compliance - The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonable mitigated when feasible.

AQ-1.7 Support Statewide Climate Change Solutions - The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under AB 32 (Health and Safety Code Section 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 determine its consistency with the emission reduction strategies.

AQ-1.8 Greenhouse Gas Emissions Reduction Plan/Climate Action Plan - 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.

1. Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,

2. Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and

3. Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.

AQ-1.9 Support Off-Site Measures to Reduce Greenhouse Gas Emissions - The County will support and encourage the use of off-site measures or the purchase of carbon offsets to reduce greenhouse gas emissions.

VIII. HAZARDS AND HAZARDOUS MATERIALS – 2 Policies

HS-4.1 Hazardous Materials - The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

IX. HYDROLOGY AND WATER QUALITY –20 Policies

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

AG-1.17 Agricultural Water Resources - The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture.

HS-4.4 Contamination Prevention - The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination.

WR-1.1 Groundwater Withdrawal - The County shall cooperate with water agencies and management agencies during land development processes to help promote an adequate, safe, and economically viable groundwater supply for existing and future development within the County. These actions shall be intended to help the County mitigate the potential impact on ground water resources identified during planning and approval processes.

WR-1.5 Expand Use of Reclaimed Wastewater - To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts

WR-1.6 Expand Use of Reclaimed Water - The County shall encourage the use of tertiary treated wastewater and household gray water for irrigation of agricultural lands, recreation and open space areas, and large landscaped areas as a means of reducing demand for groundwater resources.

WR-2.1 Protect Water Quality - All major land use and development plans shall be evaluated as to their potential to create surface and groundwater contamination hazards from point and non-point sources. The County shall confer with other appropriate agencies, as necessary, to assure adequate water quality review to prevent soil erosion; direct discharge of potentially harmful substances; ground leaching from storage of raw materials, petroleum products, or wastes; floating debris; and runoff from the site.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - 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 Best Management Practices (BMPs) - 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.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

WR-3.3 Adequate Water Availability - The County shall review new development proposals to ensure the intensity and timing of growth will be consistent with the availability of adequate water supplies. Projects must submit a Will-Serve letter as part of the application process, and provide evidence of adequate and sustainable water availability prior to approval of the tentative map or other urban development entitlement.

WR-3.6 Water Use Efficiency - The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

WR-1.5 Expand Use of Reclaimed Wastewater - To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.

PFS-1.8 Funding for Service Providers - The County shall encourage special districts, including community service districts and public utility districts to:

1. Institute impact fees and assessment districts to finance improvements,
2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and
3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems.

PFS-1.13 Municipal Service Reviews (MSRs) - The County shall use MSRs adopted by LAFCo and Urban Water Management Plans, as tools to assess the capacity, condition, and financing of various public utility services provided by special districts and cities, most commonly, domestic water and sanitary sewer.

PFS-3.3 New Development Requirements - The County shall require all new development, within UDBs, UABs, Community Plans, Hamlet Plans, Planned Communities, Corridor Areas, Area Plans, existing wastewater district service areas, or zones of benefit, to connect to the wastewater system, where such systems exist. The County may grant exceptions in extraordinary circumstances, but in these cases, the new development shall be required to connect to the wastewater system when service becomes readily available.

PFS-3.7 Financing - The County shall cooperate with special districts when applying for State and federal funding for major wastewater related expansions/upgrades when such plans promote the efficient solution to wastewater treatment needs for the area and County.

FGMP-8.4 Development of Wastewater Systems - The County shall ensure that new wastewater systems meet the standards of the Regional Water Quality Control Board and Tulare County Health & Human Services.

FGMP-9.2 Provision of Adequate Infrastructure - The County shall require evidence, prior to project approval, which (1) describes a safe and reliable method of wastewater treatment and disposal; and (2) substantiates an adequate water supply for domestic and fire protection purposes.

FGMP-9.5 Alternate Sewage Disposal - The County may allow unconventional methods of disposing of sewage effluent, provided the system meets the performance standards of the Water Quality Control Board and the Tulare County Health and Human Services Agency.

Such systems may include, but are not limited to common leach field, soil absorption mounds, aerobic septic tanks, or evapotranspiration systems.

X. LAND USE AND PLANNING – 8 Policies

PF-6.4 UDBs and Interagency Coordination - The County shall use UDBs to provide a definition of an urban area for other planning programs, such as:

1. The area within the UDB should be considered as the same area for which water and sewer system planning may be needed and to be a consideration in the determination of an area required to adequately assess the availability and sufficiency of water supplies.
2. UDBs should be used to define traffic analysis zones in the Regional Transportation Plan program.
3. The UDBs shall be used to provide a framework for inventories on growth and development, as well as socio-economic data

AG-1.10 Extension of Infrastructure into Agricultural Areas - 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.

WR-2.2 National Pollutant Discharge Elimination System (NPDES) Enforcement - 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-2.4 Construction Site Sediment Control - The County shall continue to enforce provisions to control erosion and sediment from construction sites.

WR-2.8 Point Source Control - The County shall work with the Regional Water Quality Control Board to ensure that all point source pollutants are adequately mitigated (as part of the California Environmental Quality Act review and project approval process) and monitored to ensure long-term compliance.

PFS-1.5 Funding for Public Facilities - The County shall implement programs and/or procedures to ensure that funding mechanisms necessary to adequately cover the costs related to planning, capital improvements, maintenance, and operations of necessary public facilities and services are in place, whether provided by the County or another entity.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach

fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-3.5 Wastewater System Failures - The County shall require landowners to repair failing septic tanks, leach field, and package systems that constitute a threat to water quality and public health or connect to an existing community system through applicable County and/or Regional Water Quality Control Boar standards and requirements.

XI. MINERAL RESOURCES – 3 Policies

ERM-2.1 Conserve Mineral Deposits - The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.

ERM-2.2 Recognize Mineral Deposits - The County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits.

ERM-2.10 Incompatible Development - Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted.

XII. NOISE – 4 Policies

HS-8.2 Noise Impacted Areas - The County shall designate areas as noise-impacted if exposed to existing or projected noise levels that exceed 60 dB Ldn (or Community Noise Equivalent Level (CNEL)) at the exterior of buildings.

HS-8.11 Peak Noise Generators - 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.

HS-8.18 Construction Noise - The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.

HS-8.19 Construction Noise Control - The County shall ensure that construction contractors implement best practices guidelines (i.e., berms, screens, etc.) as appropriate and feasible to reduce construction-related noise-impacts on surrounding land uses.

XIII. POPULATION AND HOUSING (2015-2030 Tulare County Housing Element) – 13 Policies

- Policy 1.11 Encourage the development of a broad range of housing types to provide an opportunity of choice in the local housing market.

- Policy 1.14 Pursue an equitable distribution of future regional housing needs allocations, thereby providing a greater likelihood of assuring a balance between housing development and the location of employment opportunities.

- Policy 1.33 Encourage and support a balance between housing and agricultural needs.

- Policy 2.11 Encourage Federal and State governments to increase the level of funding for improvements or expansion of public infrastructure serving the unincorporated communities.

- Policy 2.12 Increase opportunities for technical assistance to public utility districts and community service districts and mutual water companies in an effort to educate and assist them in attaining the necessary public infrastructure.

- Policy 2.13 When land is purchased by the County in conjunction with installation of new public facilities, the County will endeavor to make any excess land available to housing agencies for development of affordable housing.

- Policy 2.14 Create and maintain a matrix of Infrastructure Development Priorities for Disadvantaged Unincorporated Communities in Tulare County through analysis and investigation of public infrastructure needs and deficits, pursuant to Action Program 9.

- Policy 2.21 Require all proposed housing within the development boundaries of unincorporated communities is either (1) served by community water and sewer, or (2) that physical conditions permit safe treatment of liquid waste by septic tank systems and the use of private wells.

- Policy 2.24 Improvement requirements should reflect a balance between housing needs and the protection of public health and safety.

- Policy 2.25 The County shall encourage special districts, including community services districts and public utility districts to: 1. Institute impact fees and assessment districts to finance improvements, 2. Take on additional responsibilities for services and facilities within their jurisdictional boundaries up to the full extent allowed under State law, and 3. Investigate feasibility of consolidating services with other districts and annexing systems in proximity to promote economies of scale, such as annexation to city systems and regional wastewater treatment systems (GPU PFS 1.8 Funding for Service Providers).

- Policy 3.11 Support and coordinate with local economic development programs to encourage a "jobs to housing balance" throughout the unincorporated area.

- Policy 5.21 Administer and enforce the relevant portions of the Health and Safety Code.

- Action Program 9 – Housing Related Infrastructure Needs

  Provide vital information used for planning and development purposes, target expansion or repair of infrastructure and municipal services to areas with the most need and secure Federal and State funding for housing-related infrastructure. Provide technical assistance to PUDs, CSDs, and Mutual to fund infrastructure improvement and expansion, ensure safe and adequate water and liquid waste disposal, and have an equitable balance of fees between new and existing residents.

XIV. PUBLIC SERVICES – 7 Policies

PFS-7.1 Fire Protection - The County shall strive to expand fire protection service in areas that experience growth in order to maintain adequate levels of service.

PFS-7.2 Fire Protection Standards - The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.

PFS-7.3 Visible Signage for Roads and Buildings - The County shall strive to ensure all roads are properly identified by name or number with clearly visible signs.

PFS-7.5 Fire Staffing and Response Time Standards - The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association (NFPA) standards.

PFS-7.6 Provision of Station Facilities and Equipment - The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County's service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.

PFS-7.8 Law Enforcement Staffing Ratios - The County shall strive to achieve and maintain a staffing ratio of 3 sworn officers per 1,000 residents in unincorporated areas.

PFS-7.9 Sheriff Response Time - The County shall work with the Sheriff's Department to achieve and maintain a response time of:
1. Less than 10 minutes for 90 percent of the calls in the valley region; and
2. 15 minutes for 75 percent of the calls in the foothill and mountain regions.

XV. RECREATION – None that would apply to this Project.

XVI. TRANSPORTATION AND TRAFFIC – 3 Policies

TC-1.14 Roadway Facilities - As part of the development review process, new development shall be conditioned to fund, through impact fees, tonnage fees, and/or other mechanism, the construction and maintenance of roadway facilities impacted by the project. As projects or locations warrant, construction or payment of pro-rata fees for planned road facilities may also be required as a condition of approval.

TC-1.16 County Level of Service (LOS) Standards - The County shall strive to develop and manage its roadway system (both segments and intersections) to meet a LOS of "D" or better in accordance with the LOS definitions established by the Highway Capacity Manual.

HS-1.9 Emergency Access - The County shall require, where feasible, road networks (public and private) to provide for safe and ready access for emergency equipment and provide alternate routes for evacuation.

XVII. TRIBAL CULTURAL RESOURCES– 6 Policies

ERM-6.1 Evaluation of Cultural and Archaeological Resources - 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 Protection of Resources with Potential State or Federal Designations - 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-6.3 Alteration of Sites with Identified Cultural Resources - When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and Mitigation Measures proposed for any impacts the development may have on the resource.

ERM-6.4 Mitigation - If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.

ERM-6.9 Confidentiality of Archaeological Sites - The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.

ERM-6.10 Grading Cultural Resources Sites - The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

XVIII. UTILITIES AND SERVICES SYSTEMS – 8 Policies

PFS-2.3 Well Testing - The County shall require new development that includes the use of water wells to be accompanied by evidence that the site can produce the required volume of water without impacting the ability of existing wells to meet their needs.

PFS-2.5 New Systems or Individual Wells - 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.

PFS-3.1 Private Sewage Disposal Standards - The County shall maintain adequate standards for private sewage disposal systems (e.g., septic tanks) to protect water quality and public health.

PFS-3.4 Alternative Rural Wastewater Systems - The County shall consider alternative rural wastewater systems for areas outside of community UDBs and HDBs that do not have current systems or system capacity. For individual users, such systems include elevated leach fields, sand filtration systems, evapotranspiration beds, osmosis units, and holding tanks. For larger generators or groups of users, alternative systems, including communal septic tank/leach field systems, package treatment plants, lagoon systems, and land treatment, can be considered.

PFS-4.1 Stormwater Management Plans - The County shall oversee, as per Community Plan Content Table PF-2.1 and Specific Plan Content, Hamlet Plans Policy PF-3.3, and Table LU-4.3, the preparation and adoption of stormwater management plans for communities and hamlets to reduce flood risk, protect soils from erosion, control stormwater, and minimize impacts on existing drainage facilities, and develop funding mechanisms as a part of the Community Plan and Hamlet Plan process.

PFS-5.8 Hazardous Waste Disposal Capabilities - The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan.

PFS-4.7 NPDES Enforcement - The County shall continue to monitor and enforce provisions to control non-point source water pollution contained in the U.S. Environmental Protection Agency National Pollution Discharge Elimination System (NPDES) program.

PFS-5.8 Hazardous Waste Disposal Capabilities - The County shall require the proper disposal and recycling of hazardous materials in accordance with the County's Hazardous Waste Management Plan. In order to implement the wastewater services, an entity with

sufficient operational capabilities may be formed. The community could also leave governance of wastewater operations to the City of Livingston through an extraterritorial agreement. As is the case with the Pratt Mutual Water Company, which currently owns and operates the community's water system, creation of a private wastewater service entity is an option.

REFERENCES

Chapter 3.1 thru 3.18 of this DEIR

Public Resources Code, Sections 2710-2796

CEQA Guidelines, Sections 15043, 15093 (a) (b) (c), and 15126.2 (b) (c)

Tulare County General Plan 2030 Update

CHAPTER 8

MITIGATION MONITORING AND REPORTING PROGRAM

This Draft Mitigation Monitoring and Reporting Program (MMRP) has been prepared in compliance with State law and based upon the findings of the Draft Environmental Impact Report (EIR) for the proposed Project. The MMRP lists mitigation measures recommended in the draft EIR for the proposed Project and identifies monitoring and reporting requirements.

The CEQA Public Resources Code Section 21081.6 requires the Lead Agency decision making body is going to approve a project and certify the EIR that it also adopt a reporting or monitoring program for those measures recommended to mitigate or avoid significant/adverse effects of the environment identified in the EIR. The law states that the reporting or monitoring program shall be designed to ensure compliance during project implementation. The MMRP is to contain the following elements:

- **Action and Procedure.** The mitigation measures are recorded with the action and procedure necessary to ensure compliance. In some instances, one action may be used to verify implementation of several mitigation measures.

- **Compliance and Verification.** A procedure for compliance and verification has been outlined for each action necessary. This procedure designates who will take action, what action will be taken and when and by whom and compliance will be monitored and reported and to whom it will be report. As necessary the reporting should indicate any follow-up actions that might be necessary if the reporting notes the impact has not been mitigated.

- **Flexibility.** The program has been designed to be flexible. As monitoring progresses, changes to compliance procedures may be necessary based upon the recommendations by those responsible for the MMRP. As changes are made, new monitoring compliance procedures and records will be developed and incorporated into the program

Table 8-1 presents the Mitigation Measures identified for the proposed Project in this EIR. Each Mitigation Measure is identified by alpha-numeric symbol indicating the topical section to which it pertains, a hyphen, and the impact number. For example, BIO 3.4-1 would be the first Mitigation Measure identified in the Biological analysis of the draft EIR.

The first column of **Table 8-1** identifies the Mitigation Measure. The second column, entitled "When Monitoring is to Occur," identifies the time the Mitigation Measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring that should take place to assure the mitigation is being or has been implemented to achieve the desired outcome or performance standard... The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the Mitigation Measure is implemented. The last columns will be used by the Wastewater System Governing Entity once formed to ensure that individual Mitigation Measures have been complied with and monitored.

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
BIOLOGICAL RESOURCES							
Valley Elderberry Longhorn Beetle							
3.4-1a (Avoidance) Prior to initiation of a given project within the PPSA, a survey for elderberry shrubs will be conducted by a qualified biologist, unless the entire project area is completely devoid of shrubby vegetation, in which case a elderberry survey is not necessary. If elderberry shrubs are identified during the survey, then they will be avoided. Typically, the USFWS considers a 100-foot disturbance-free buffer around elderberry shrubs complete avoidance. However, a buffer of as little as 20 feet may be arranged in consultation with the USFWS. The buffer will be clearly delineated with orange construction fencing with the appropriate signage posted. This elderberry avoidance area will be clearly marked with signs, fencing, and/or flagging, and maintained	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
for the duration of work in that area. No construction personnel or equipment shall enter the elderberry avoidance area, except for as provided under *Mitigation Measure 3.3.3b* below.							
***3.4-1b* (*Construction Monitoring*)** If project activities necessitate temporary entry into the elderberry avoidance area, approval will first be obtained from the USFWS and a qualified biologist will be on-site to monitor such activities for their duration within the avoidance area.	Prior to and during construction-related activities.	As needed if special status species are detected.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist.			
3.4-1c (Employee Education Program). Prior to implementation of projects with elderberry shrubs on site, construction personnel will receive worker environmental awareness training in the identification of the VELB and its host plant.	Prior to construction-related activities.	As needed if special status species are detected.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist working with USFS and/or CFW			
3.4-1d (Compensation). If it is not feasible to completely avoid all elderberry shrubs, then impacts to the	During construction-related	On-going during construction-related activities	Governing Entity established for operating the	Construction manager with oversight by			

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
shrubs will be mitigated in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999). This generally involves 1) conducting a protocol-level elderberry survey to assess the degree of "take" that will occur, 2) transplanting the shrubs to on-site or off-site lands protected in perpetuity under conservation easement ("conservation area"), or to a VELB mitigation bank, and 3) replacing each impacted stem with new elderberry plantings at a ratio of 1:1 to 1:8 (depending on stem diameter, presence of beetle exit holes, and habitat type) *or* purchasing an equivalent number of credits at a VELB mitigation bank.	activities.		Wastewater System Services.	qualified biologist.			
San Joaquin Kit Fox							
3.4-2a (Pre-construction Surveys). Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities,	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.		mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.					
3.4-2b (Avoidance). Should a kit fox be found using any of the sites during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
3.4-2c (Minimization). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g., pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.	During construction.	As needed during construction.	Governing Entity.	Determination by qualified biologist.			
3.4-2d (Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat	Prior to construction-related activities.	As needed if special status species are detected.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist working with USFS and/or CFW			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.							
3.4-2e (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	During Construction.	Ongoing throughout construction.	Governing Entity established for operating the Wastewater System Services.	Qualified biologist working with USFS and/or CFW			
Burrowing Owl							
3.4-3a (Pre-construction Surveys). A pre-construction survey for burrowing	Prior to start of construction.	Once within 30 days of construction, unless pre-construction	Governing Entity established for operating the	Field survey by a qualified Biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.		survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Wastewater System Services.				
3.4-3b (Avoidance of Active Nests). If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.							
3.4-3c (Passive Relocation of Resident Owls). During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way doors on all potential owl burrows within the 50 foot buffer, 4) leaving	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.							
Nesting Raptors and Migratory Birds							
***3.4-4a* (*Avoidance*).** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
3.4-4b (Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.							
3.4-4c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
Roosting Bats							
3.4-5a (Temporal Avoidance). To avoid potential impacts to maternity bat roosts,	Prior to construction.	Ongoing throughout construction.	Governing Entity.	Determination by qualified biologist.			

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
removal of buildings and trees should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.							
3.4-5b (Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.	Prior to start of construction.	Once within 30 days of construction, unless pre-construction survey results in new recommendation for further study and mitigation. Then mitigation should occur as recommended following coordination with Governing Entity.	Governing Entity established for operating the Wastewater System Services.	Field survey by a qualified Biologist.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
3.4-5c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
3.4-5d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.	Implemented only if sensitive species are encountered.	Throughout construction.	Governing Entity.	Determination by qualified biologist.			
CULTURAL RESOURCES							
3.5-1 If, in the course of construction or	During	Daily or as needed	Governing Entity	A qualified			

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
operation within the Project area, any archaeological or historical resources are uncovered, discovered, or otherwise detected or observed, activities within fifty (50) feet of the find shall be ceased. A qualified archaeologist shall be contacted and advise the County of the site's significance. If the findings are deemed significant by the Tulare County Resources Management Agency, appropriate mitigation measures shall be required prior to any resumption of work in the affected area of the proposed Project. Where feasible, mitigation achieving preservation in place will be implemented. Preservation in place may be accomplished by, but is not limited to: planning construction to avoid archaeological sites or covering archaeological sites with a layer of chemically stable soil prior to building on the site. If significant resources are encountered, the feasibility of various methods of achieving preservation in	Construction	throughout the construction period if suspicious resources are discovered	established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
place shall be considered, and an appropriate method of achieving preservation in place shall be selected and implemented, if feasible. If preservation in place is not feasible, other mitigation shall be implemented to minimize impacts to the site, such as data recovery efforts that will adequately recover scientifically consequential information from and about the site. Mitigation shall be consistent with CEQA Guidelines section 15126.4(b)(3).							
3.5-2 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Governing Entity established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.				remains found, consistent with all applicable laws including CEQA.			
3.5-3 Consistent with Section 7050.5 of the California Health and Safety Code and (CEQA Guidelines) Section 15064.5, if human remains of Native American origin are discovered during project construction, it is necessary to comply with State laws relating to the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (Public Resources Code Sec. 5097). In the event of the accidental [that is, unanticipated] discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken: 1. There shall be no further	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Governing Entity established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until: a. The Tulare County Coroner/Sheriff must be contacted to determine that no investigation of the cause of death is required; and b. If the coroner determines the remains to be Native American: i. The coroner shall contact the Native American							

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
Heritage Commission within 24 hours. ii. The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. iii. The most							

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated							

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
grave goods as provided in Public Resources Code section 5097.98, or 2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. a. The Native American Heritage							

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission. b. The descendant fails to make a recommendation; or c. The landowner or his authorized representative rejects the recommendation of the descendent.							

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
TRANSPORTATION/TRAFFIC							
3.16-1 Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction to give adequate warning to the public of the construction and of any potentially dangerous condition to be encountered as a result thereof.	During Construction activities	On-going during construction-related activities	County of Tulare/ Governing Entity established for constructing and operating the Wastewater System Services via specific contractual requirements and via on-going review of records kept by contractor to document compliance	Maintenance by contractor of documentary evidence of compliance. Such records to be provided to County of Tulare/Govern-ng Entity upon request			
TRIBAL CULTURAL RESOURCES							
3.17-1 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Governing Entity established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to			

Table 8-1
Mitigation Monitoring and Reporting Program

Mitigation Measure	Monitoring Timing / Frequency	Action Indicating Compliance	Monitoring Agency	Person conducting Monitoring / Reporting	Verification of Compliance		
					Initials	Date	Remarks
significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall be ceased.				mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			
3.17-1 If cultural resources are encountered during project-specific construction or land modification activities work shall stop and the County shall be notified at once to assess the nature, extent, and potential significance of any cultural resources. If such resources are determined to be significant, appropriate actions shall be determined. Depending upon the nature of the find, mitigation could involve avoidance, documentation, or other appropriate actions to be determined by a qualified archaeologist. For example, activities within 50 feet of the find shall	During Construction	Daily or as needed throughout the construction period if suspicious resources are discovered	Governing Entity established for operating the Wastewater System Services via field evaluation of the resource finds by a qualified archaeologist	A qualified archaeologist shall document the results of field evaluation and shall recommend further actions that shall be taken to mitigate for unique resource or human remains found, consistent with all applicable laws including CEQA.			

Table 8-1 Mitigation Monitoring and Reporting Program							
Mitigation Measure	**Monitoring Timing / Frequency**	**Action Indicating Compliance**	**Monitoring Agency**	**Person conducting Monitoring / Reporting**	**Verification of Compliance**		
					Initials	**Date**	**Remarks**
be ceased.							

Chapter 9

Report Preparation

PERSONS WHO PREPARED THIS REPORT

Key persons from the County of Tulare and the consulting firms that contributed to preparation of the Draft Environmental Impact Report (Draft EIR) are identified below:

LEAD AGENCY: COUNTY OF TULARE RESOURCE MANAGEMENT AGENCY

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APPENDIX A

AIR QUALITY & GREENHOUSE GASES

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> Plainview WWS Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	9.5	43.2	77.3	6.8	4.3	2.5	4.5	4.0	0.5	7,775.0
Drainage/Utilities/Sub-Grade	10.3	47.2	74.3	7.3	4.8	2.5	4.9	4.4	0.5	8,058.2
Paving	5.8	27.1	35.8	2.5	2.5	-	2.3	2.3	-	4,298.3
Maximum (pounds/day)	10.3	47.2	77.3	7.3	4.8	2.5	4.9	4.4	0.5	8,058.2
Total (tons/construction project)	1.3	5.8	9.6	0.8	0.6	0.3	0.6	0.5	0.1	1,012.7

Notes:

Project Start Year ->	2016
Project Length (months) ->	13
Total Project Area (acres) ->	11
Maximum Area Disturbed/Day (acres) ->	0
Total Soil Imported/Exported (yd^3/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Plainview WWS Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	Total PM10 (kgs/day)	Exhaust PM10 (kgs/day)	Fugitive Dust PM10 (kgs/day)	Total PM2.5 (kgs/day)	Exhaust PM2.5 (kgs/day)	Fugitive Dust PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	-	-	-	-	-	-	-	-	-	-
Grading/Excavation	4.3	19.6	35.1	3.1	2.0	1.1	2.0	1.8	0.2	3,534.1
Drainage/Utilities/Sub-Grade	4.7	21.5	33.8	3.3	2.2	1.1	2.2	2.0	0.2	3,662.8
Paving	2.6	12.3	16.3	1.1	1.1	-	1.0	1.0	-	1,953.8
Maximum (kilograms/day)	4.7	21.5	35.1	3.3	2.2	1.1	2.2	2.0	0.2	3,662.8
Total (megagrams/construction project)	1.2	5.3	8.7	0.8	0.5	0.2	0.5	0.5	0.0	918.6

Notes:

Project Start Year ->	2016
Project Length (months) ->	13
Total Project Area (hectares) ->	4
Maximum Area Disturbed/Day (hectares) ->	0
Total Soil Imported/Exported ($meters^3$/day)->	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sume of exhaust and fugitive dust emissions shown in columns K and L.

Road Construction Emissions Model

Version 7.1.5.1

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type		
Project Name	Plainview WWS	
Construction Start Year	2016	Enter a Year between 2009 and 2025 (inclusive)
Project Type	1	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	12.50	months
Predominant Soil/Site Type: Enter 1, 2, or 3	2	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	4.50	miles
Total Project Area	11.00	acres
Maximum Area Disturbed/Day	0.25	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported		yd^3/day
Soil Exported		yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months
Grubbing/Land Clearing	0.00	1.25
Grading/Excavation	5.63	5.63
Drainage/Utilities/Sub-Grade	4.99	3.75
Paving	1.88	1.88
Totals	12.50	12.50

2005	%	2006	%	2007	%
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.

Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions	User Override of Soil Hauling Defaults	Default Values
User Input		
Miles/round trip		30
Round trips/day		0
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	**ROG**	**NOx**	**CO**	**PM10**	**PM2.5**	**CO2**
Emission rate (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing	8.00	14
No. of employees: Grading/Excavation	8.00	26
No. of employees: Drainage/Utilities/Sub-Grade	8.00	24
No. of employees: Paving	8.00	20

	ROG	**NOx**	**CO**	**PM10**	**PM2.5**	**CO2**
Emission rate - Grubbing/Land Clearing (grams/mile)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.147	0.194	1.744	0.047	0.020	443.650
Emission rate - Paving (grams/mile)	0.143	0.188	1.694	0.047	0.020	443.681
Emission rate - Grubbing/Land Clearing (grams/trip)	0.000	0.000	0.000	0.000	0.000	0.000
Emission rate - Grading/Excavation (grams/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.505	0.323	4.200	0.004	0.003	95.592
Emission rate - Paving (grams/trip)	0.493	0.313	4.088	0.004	0.003	95.606
Pounds per day - Grubbing/Land Clearing	0.000	0.000	0.000	0.000	0.000	0.000
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.000	0.000	0.000	0.000
Pounds per day - Grading/Excavation	0.122	0.148	1.377	0.033	0.014	316.074
Tons per const. Period - Grading/Excavation	0.008	0.009	0.085	0.002	0.001	19.574
Pounds per day - Drainage/Utilities/Sub-Grade	0.122	0.148	1.377	0.033	0.014	316.074
Tons per const. Period - Drain/Util/Sub-Grade	0.007	0.008	0.076	0.002	0.001	17.349
Pounds per day - Paving	0.119	0.144	1.338	0.033	0.014	316.096
Tons per const. Period - Paving	0.002	0.003	0.028	0.001	0.000	6.537
tons per construction period	0.017	0.020	0.189	0.005	0.002	43.461

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.00	0.00	0.00	0.00	0.00	0.00
Emission rate - Grading/Excavation (grams/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.16	8.25	0.70	0.17	0.10	1679.86
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.00
Pound per day - Grading/Excavation	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Grading/Excavation	0.00	0.05	0.00	0.00	0.00	9.17
Pound per day - Drainage/Utilities/Subgrade	0.01	0.73	0.06	0.01	0.01	148.00
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.04	0.00	0.00	0.00	8.12

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0	0.0	0.0	0.0	0.0
Fugitive Dust - Grading/Excavation		0.25	2.5	0.2	0.5	0.0
Fugitive Dust - Drainage/Utilities/Subgrade		0.25	2.5	0.1	0.5	0.0

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	9	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	0.0	0.0	0.0	0.0	0.0	0.0
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.0	0.0	0.0	0.0

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
1.00	0	Cranes	0.75	3.00	8.48	0.38	0.35	601.74
	1	Crawler Tractors	0.74	4.47	9.52	0.37	0.34	824.89
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.41	2.79	4.47	0.22	0.20	572.86
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
2.00		Other Material Handling Equipment	1.19	6.35	12.13	0.65	0.60	1217.19
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Rubber Tired Loaders	0.52	3.12	6.51	0.22	0.20	662.62
0.00	2	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	9	Signal Boards	3.27	12.28	11.88	0.86	0.79	1416.90
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
4.00	2	Tractors/Loaders/Backhoes	1.43	6.29	13.08	1.01	0.93	1343.70
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	9.4	41.8	76.4	4.3	3.9	7310.9
	Grading	tons per phase	0.6	2.6	4.7	0.3	0.2	452.8

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.68	3.42	4.38	0.37	0.34	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
4.00		Cement and Mortar Mixers	0.27	1.41	1.69	0.07	0.06	231.52
1.00		Concrete/Industrial Saws	0.51	2.98	3.65	0.28	0.25	467.14
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.51	2.98	3.86	0.27	0.25	487.07
	1	Graders	1.07	3.48	10.38	0.58	0.54	671.02
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
4.00		Other Material Handling Equipment	2.38	12.69	24.25	1.30	1.20	2434.39
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
0.00	2	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	9	Signal Boards	3.27	12.28	11.88	0.86	0.79	1416.90
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
4.00	2	Tractors/Loaders/Backhoes	1.43	6.29	13.08	1.01	0.93	1343.70
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	10.2	45.8	73.4	4.7	4.4	7594.1
	Drainage	tons per phase	0.6	2.5	4.0	0.3	0.2	416.8

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	CO2 pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	1	Pavers	0.41	2.84	4.36	0.22	0.20	481.75
1.00	1	Paving Equipment	0.31	2.69	3.44	0.17	0.16	426.34
1.00		Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Rollers	0.34	1.51	3.03	0.22	0.20	279.51
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
	9	Signal Boards	3.17	12.19	11.76	0.83	0.77	1416.90
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
4.00	2	Tractors/Loaders/Backhoes	1.41	6.29	12.85	0.98	0.91	1343.27
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	5.7	25.7	35.7	2.4	2.2	3982.2
	Paving	tons per phase	0.1	0.5	0.7	0.1	0.0	82.4
Total Emissions all Phases (tons per construction period) =>			1.3	5.6	9.5	0.6	0.5	952.0

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

APPENDIX B

BIOLOGICIAL RESOURCES

OCCURRENCE REPORT

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Selma (3611955) OR Reedley (3611954) OR Orange Cove South (3611953) OR Burris Park (3611945) OR Traver (3611944) OR Monson (3611943) OR Remnoy (3611935) OR Goshen (3611934) OR Visalia (3611933))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)
 AND CNPS List IS (1A OR 1B OR 1B.1 OR 1B.2 OR 1B.3 OR 2A OR 2B OR 2B.1 OR 2B.2 OR 2B.3 OR 3 OR 3.1 OR 3.2 OR 3.3 OR 4 OR 4.1 OR 4.2 OR 4.3)

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 25082
EO Index: 6193
Key Quad: Orange Cove South (3611953)
Element Code: PDAPI0Z0Y0
Occurrence Number: 6
Occurrence Last Updated: 2010-10-21

Scientific Name: *Eryngium spinosepalum*
Common Name: spiny-sepaled button-celery

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:

VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

SOME SITES ON CLAY SOIL OF GRANITIC ORIGIN; VERNAL POOLS, WITHIN GRASSLAND. 15-1270 M.

Last Date Observed: 2000-09-22
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2000-09-22
Occurrence Rank: Excellent
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTH SIDE OF AVE 460, ABOUT 1.1 ROAD MILES EAST OF ROAD 128, EAST OF ORANGE COVE.

Detailed Location:

TWO LARGE SEMICIRCULAR VERNAL POOLS TRUNCATED BY ROADWAY; PLANTS FOUND ON THE DRIED POOL BEDS, ALSO ALONG ROAD SHOULDER. TWO COLONIES MAPPED IN THE N 1/2 OF THE SW 1/4 OF SECTION 16 ACCORDING TO A 1992 MAP BY STONE.

Ecological:

VERNAL POOLS. ASSOCIATED WITH PSILOCARPHUS BREVISSIMUS, HORDEUM GENICULATUM, H. MARINUM, EREMOCARPUS, CENTROMADIA FITCHII, TRICHOSTEMA LANCEOLATUM, AND ELEOCHARIS MACROSTACHYA.

Threats:

CATTLE GRAZING AND TRAMPLING ARE IMPACTING THIS POPULATION. FUTURE CONVERSION TO AGRICULTURE IS POTENTIAL THREAT.

General:

LOCALLY ABUNDANT IN 1992; ALSO OBSERVED IN VERNAL POOLS A SHORT DISTANCE TO THE EAST OF MAPPED LOCATION. POPULATION & HABITAT IN GOOD SHAPE ACCORDING TO PRESTON (2000). 1935 HOOVER COLLECTION FROM ORANGE COVE ALSO ATTRIBUTED TO THIS SITE.

PLSS: T15S, R25E, Sec. 16, SW (M)
Accuracy: specific area
Area (acres): 4
UTM: Zone-11 N4055564 E297376
Latitude/Longitude: 36.62409 / -119.26600
Elevation (feet): 490

County Summary:	Quad Summary:
Tulare	Orange Cove South (3611953)

Sources:

HOO35S0007	HOOVER, R. - HOOVER #688 UC #766249, LA #33331 1935-07-16
PRE00F0022	PRESTON, R. - FIELD SURVEY FORM FOR ERYNGIUM SPINOSEPALUM 2000-09-22
PRE00S0027	PRESTON, R. - PRESTON #1438 DAV #77710 2000-09-06
STE87U0005	STEBBINS, J. - ELEMENT OCCURRENCE EVALUATION FORM FOR ERYNGIUM SPINOSEPALUM 1987-XX-XX
STO92F0011	STONE, R. - FIELD SURVEY FORM FOR ERYNGIUM SPINOSEPALUM 1992-06-16

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 31586
Key Quad: Monson (3611943)
Occurrence Number: 66
EO Index: 81502
Element Code: PDAPI0Z0Y0
Occurrence Last Updated: 2010-10-26

Scientific Name: *Eryngium spinosepalum*
Common Name: spiny-sepaled button-celery

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:

VERNAL POOLS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

SOME SITES ON CLAY SOIL OF GRANITIC ORIGIN; VERNAL POOLS, WITHIN GRASSLAND. 15-1270 M.

Last Date Observed: 1992-XX-XX
Last Survey Date: 1992-XX-XX
Owner/Manager: PVT
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

NORTH OF VISALIA, ABOUT 1 MILE SOUTHEAST OF SEQUOIA AIRFIELD.

Detailed Location:

APPROX. 0.7 MILE WEST OF DINUBA BLVD AND 0.2-0.35 MI NORTH OF 12TH AVENUE NORTH. 0.2-0.4 MILE SSW OF WINDMILL.

Ecological:

VERNAL POOLS SURROUNDED BY ANNUAL GRASSLAND. ASSOCIATED WITH EREMOCARPUS, POLYPOGON, SIDA, HORDEUM GENICULATUM, DISTICHLIS SPICATA, LILAEA SCILLOIDES, HEMIZONIA PUNGENS, ANTHOXANTHUM ODORATUM, AND THE RARE CHAMAESYCE HOOVERI.

Threats:

CATTLE GRAZING IN WINTER PASTURE AND POTENTIAL CONVERSION TO IRRIGATED AGRICULTURE.

General:

ERYNGIUM LISTED AS AN ASSOCIATE IN SURVEY REPORTS FOR CHAMAESYCE HOOVERI FROM 1988 AND 1992; UNKNOWN HOW MANY PLANTS OBSERVED. NEEDS POPULATION INFORMATION.

PLSS: T17S, R25E, Sec. 19, SW (M)
Accuracy: specific area
Area (acres): 10
UTM: Zone-11 N4034424 E293092
Latitude/Longitude: 36.43275 / -119.30821
Elevation (feet): 320

County Summary:	Quad Summary:
Tulare	Monson (3611943)

Sources:

BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	94322	**EO Index:**	95422
Key Quad:	Orange Cove South (3611953)	**Element Code:**	PDAST4N260
Occurrence Number:	2	**Occurrence Last Updated:**	2014-10-30

Scientific Name: *Helianthus winteri* **Common Name:** Winter's sunflower

Listing Status: **Federal:** None **Rare Plant Rank:** 1B.2

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G1G2

State: S1S2

General Habitat:

CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

OPENINGS ON RELATIVELY STEEP SOUTH-FACING SLOPES, GRANITIC, OFTEN ROCKY, OFTEN ROADSIDES. 130-305 M.

Last Date Observed:	2014-02-15	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2014-02-15	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ABOUT 0.5 KM NE OF FRIANT-KERN CANAL ON SOUTH SLOPE OF CURTIS MOUNTAIN.

Detailed Location:

MAPPED BY CNDDB FROM 2013 STEBBINS COORDINATES, IN THE SW 1/4 OF THE SE 1/4 OF SECTION 28. DATUM UNKNOWN; ASSUMED TO BE NAD83.

Ecological:

Threats:

ADJACENT TO INTENSIVE AGRICULTURE.

General:

STEBBINS IDENTIFIES CURTIS MOUNTAIN AS THE LARGEST POPULATION, BUT ACTUAL NUMBERS UNKNOWN. OBSERVED IN 2013 AND 2014.

PLSS:	T15S, R25E, Sec. 28, SE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4051720 E298026	**Latitude/Longitude:**	36.58960 / -119.25772	**Elevation (feet):**	480

County Summary:	**Quad Summary:**
Tulare	Orange Cove South (3611953)

Sources:

STE13A0001	STEBBINS, J. ET AL. - HELIANTHUS WINTERI, A NEW PERENNIAL SPECIES FROM THE SOUTHERN SIERRA NEVADA FOOTHILLS, CALIFORNIA. ALISO 31:19-24. 2013-XX-XX
STE13S0001	STEBBINS, J. & J. CONSTABLE - STEBBINS #12945 (CITED IN STE13A0001) 2013-01-07
STE14U0002	STEBBINS, J. - EMAIL TO AARON SIMS REGARDING HELIANTHUS WINTERI OCCURRENCES 2014-09-03
WIN14I0003	WINCHELL, C. - PHOTOS OF HELIANTHUS WINTERI, CALPHOTOS ID: 0000 0000 0214 1138, 1140-1141, 1143-1147, 1149-1154 & 1167 2014-02-15

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 94323
EO Index: 95424
Key Quad: Orange Cove South (3611953)
Element Code: PDAST4N260
Occurrence Number: 3
Occurrence Last Updated: 2014-10-28

Scientific Name: *Helianthus winteri*
Common Name: Winter's sunflower

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G1G2
State: S1S2

General Habitat:

CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

OPENINGS ON RELATIVELY STEEP SOUTH-FACING SLOPES, GRANITIC, OFTEN ROCKY, OFTEN ROADSIDES. 130-305 M.

Last Date Observed: 2012-10-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-10-12
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

EAST SIDE OF FRIANT-KERN CANAL AND SW OF CURTIS MOUNTAIN ADJACENT TO SOUTHERN CALIFORNIA EDISON TRANSMISSION LINES.

Detailed Location:

MAPPED BY CNDDB FROM 2012 STEBBINS COORDINATES, IN THE NW 1/4 OF THE SW 1/4 OF SECTION 29. DATUM UNKNOWN; ASSUMED TO BE NAD83.

Ecological:

Threats:

AREAS OF INTENSIVE AGRICULTURE NEARBY.

General:

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 2012 STEBBINS COLLECTION. NEEDS POPULATION AND ECOLOGICAL INFORMATION.

PLSS: T15S, R25E, Sec. 29, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4052154 E295680
Latitude/Longitude: 36.59301 / -119.28405
Elevation (feet): 435

County Summary:

Tulare

Quad Summary:

Orange Cove South (3611953)

Sources:

STE12S0005	STEBBINS, J. & J. CONSTABLE - STEBBINS #12943 (CITED IN STE13A0001) 2012-10-12
STE13A0001	STEBBINS, J. ET AL. - HELIANTHUS WINTERI, A NEW PERENNIAL SPECIES FROM THE SOUTHERN SIERRA NEVADA FOOTHILLS, CALIFORNIA. ALISO 31:19-24. 2013-XX-XX
STE14U0002	STEBBINS, J. - EMAIL TO AARON SIMS REGARDING HELIANTHUS WINTERI OCCURRENCES 2014-09-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 94324
EO Index: 95425
Key Quad: Orange Cove South (3611953)
Element Code: PDAST4N260
Occurrence Number: 4
Occurrence Last Updated: 2014-10-28

Scientific Name: *Helianthus winteri*
Common Name: Winter's sunflower

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G1G2
State: S1S2

General Habitat:

CISMONTANE WOODLAND, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

OPENINGS ON RELATIVELY STEEP SOUTH-FACING SLOPES, GRANITIC, OFTEN ROCKY, OFTEN ROADSIDES. 130-305 M.

Last Date Observed: 2012-10-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-10-12
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

NORTH SIDE OF AVENUE 448, 0.3 MI WEST OF HIGHWAY 63, NW CURTIS MOUNTAIN.

Detailed Location:

MAPPED BY CNDDB FROM 2012 STEBBINS COORDINATES, IN THE SW 1/4 OF THE SE 1/4 OF SECTION 19. DATUM UNKNOWN; ASSUMED TO BE NAD83.

Ecological:

Threats:

ADJACENT TO AREAS OF INTENSIVE AGRICULTURE.

General:

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 2012 STEBBINS COLLECTION. NEEDS POPULATION AND ECOLOGICAL INFORMATION.

PLSS: T15S, R25E, Sec. 19, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4053313 E294961
Latitude/Longitude: 36.60330 / -119.29238
Elevation (feet): 600

County Summary:	Quad Summary:
Tulare	Orange Cove South (3611953)

Sources:

STE12S0004	STEBBINS, J. & J. CONSTABLE - STEBBINS #12942 (CITED IN STE13A0001) 2012-10-12
STE13A0001	STEBBINS, J. ET AL. - HELIANTHUS WINTERI, A NEW PERENNIAL SPECIES FROM THE SOUTHERN SIERRA NEVADA FOOTHILLS, CALIFORNIA. ALISO 31:19-24. 2013-XX-XX
STE14U0002	STEBBINS, J. - EMAIL TO AARON SIMS REGARDING HELIANTHUS WINTERI OCCURRENCES 2014-09-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 22865
Key Quad: Reedley (3611954)
Occurrence Number: 13
EO Index: 21673
Element Code: PDAST7P030
Occurrence Last Updated: 2017-03-30

Scientific Name: *Pseudobahia peirsonii*
Common Name: San Joaquin adobe sunburst

Listing Status: **Federal:** Threatened
State: Endangered
Rare Plant Rank: 1B.1
Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro Habitat:
GRASSY VALLEY FLOORS AND ROLLING FOOTHILLS IN HEAVY CLAY SOIL. 115-795 M.

Last Date Observed: 1927-04-11
Last Survey Date: 1990-04-08
Owner/Manager: PVT
Presence: Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:
DINUBA.

Detailed Location:
STEBBINS NOTES THAT THE MOST LIKELY SITE OF THIS COLLECTION WAS ~0.5 MILES SE OF DINUBA.

Ecological:

Threats:
IRRIGATED AGRICULTURAL LANDS AND HOUSES COMPLETELY DOMINATE THE REGION.

General:
ONLY SOURCE OF LOCATION INFORMATION IS A 1927 BEVANS COLLECTION. 1990 RECONNAISSANCE LEVEL SURVEYS BY STEBBINS INDICATE THAT POPULATION IS LIKELY EXTIRPATED DUE TO CONVERSION OF LAND TO AGRICULTURE.

PLSS: T16S, R24E, Sec. 17 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4045661 E285688
Latitude/Longitude: 36.53234 / -119.39386
Elevation (feet):

County Summary:	Quad Summary:
Tulare	Reedley (3611954)

Sources:

BEV27S0001	BEVANS, A. - BEVANS SN CAS #145590 1927-04-11
STE89U0001	STEBBINS, J. - TULARE PSEUDOBAHIA SPECIES MANAGEMENT PLAN (PSEUDOBAHIA PEIRSONII). 1989-01-31
STE91U0001	STEBBINS, J. - STATUS SURVEY OF TWO PLANTS ENDEMIC TO THE SAN JOAQUIN VALLEY, PSEUDOBAHIA BAHIIFOLIA & PSEUDOBAHIA PEIRSONII 1991-01-31
VOL10R0001	VOLLMAR CONSULTING - PSEUDOBAHIA BAHIIFOLIA AND PSEUDOBAHIA PEIRSONII 2010 STATUS SURVEY REPORT, EASTERN SAN JOAQUIN VALLEY, CALIFORNIA 2010-11-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 37160
EO Index: 32157
Key Quad: Orange Cove South (3611953)
Element Code: PDAST7P030
Occurrence Number: 42
Occurrence Last Updated: 2011-05-04

Scientific Name: *Pseudobahia peirsonii*
Common Name: San Joaquin adobe sunburst

Listing Status: **Federal:** Threatened
State: Endangered
Rare Plant Rank: 1B.1
Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro Habitat:
GRASSY VALLEY FLOORS AND ROLLING FOOTHILLS IN HEAVY CLAY SOIL. 115-795 M.

Last Date Observed: 1992-04-03
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1992-04-03
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
0.3 MILE SOUTH OF AVE 460 (SAND CREEK DRIVE), JUST EAST OF ROAD 136.

Detailed Location:
35 YARDS EAST OF FENCE.

Ecological:
ASSOCIATED WITH BRASSICA KABER, ERODIUM CICUTARIUM, PLANTAGO ERECTA, & ACHYRACHAENA. ON CIBO CLAY; VERNAL POOLS IN SURROUNDING AREA.

Threats:
OVERGRAZING THREATENS.

General:
APPROX. 100 PLANTS IN 1992. SITE WAS NOT ACCESSIBLE IN 2010.

PLSS: T15S, R25E, Sec. 16, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4055134 E297259
Latitude/Longitude: 36.62020 / -119.26720
Elevation (feet): 485

County Summary:
Tulare

Quad Summary:
Orange Cove South (3611953)

Sources:

VOL10R0001	VOLLMAR CONSULTING - PSEUDOBAHIA BAHIIFOLIA AND PSEUDOBAHIA PEIRSONII 2010 STATUS SURVEY REPORT, EASTERN SAN JOAQUIN VALLEY, CALIFORNIA 2010-11-XX
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 25124
EO Index: 3244
Key Quad: Goshen (3611934)
Element Code: PDCHE040B0
Occurrence Number: 30
Occurrence Last Updated: 2009-11-02

Scientific Name: *Atriplex cordulata var. cordulata*
Common Name: heartscale

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists: BLM_S-Sensitive

CNDDB Element Ranks: **Global:** G3T2
State: S2

General Habitat:

CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, MEADOWS AND SEEPS.

Micro Habitat:

ALKALINE FLATS AND SCALDS IN THE CENTRAL VALLEY, SANDY SOILS. 3-275 M.

Last Date Observed: 1938-09-05
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1938-05-09
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

NEAR GOSHEN.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS CENTERED ON GOSHEN.

Ecological:

Threats:

RESIDENTIAL AND COMMERCIAL DEVELOPMENT SURROUNDS; MAY NOT BE SUITABLE HABITAT REMAINING (SEE ATRIPLEX SUBTILIS EO 8).

General:

ONLY SOURCE OF INFO IS 1938 EASTWOOD & HOWELL COLLECTION. AREA SHOULD BE FIELD CHECKED FOR THE PRESENCE OF SUITABLE HABITAT. ID OF SPECIMEN SHOULD ALSO BE CHECKED; PRESTON (2009) HAS NOT FOUND THIS POPULATION, POSSIBLY A. ERECTICAULIS.

PLSS: T18S, R24E, Sec. 19 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4025373 E282725
Latitude/Longitude: 36.34893 / -119.42124
Elevation (feet): 285

County Summary:

Tulare

Quad Summary:

Goshen (3611934)

Sources:

EAS38S0010	EASTWOOD, A. & J. HOWELL - EASTWOOD #6274 RSA #22184, CAS #261511 1938-09-05
PRE09U0002	PRESTON, R. - ADDITIONAL INFORMATION REGARDING FIELD SURVEY FORMS SUBMITTED FOR ATRIPLEX CORDULATA 2009-10-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 24419
EO Index: 83720
Key Quad: Visalia (3611933)
Element Code: PDCHE042L0
Occurrence Number: 21
Occurrence Last Updated: 2011-06-01

Scientific Name: *Atriplex depressa*
Common Name: brittlescale

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:

CHENOPOD SCRUB, MEADOWS AND SEEPS, PLAYAS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.

Micro Habitat:

USUALLY IN ALKALI SCALDS OR ALK. CLAY IN MEADOWS OR ANNUAL GRASSLND; RARELY ASSOCIATED WITH RIPARIAN, MARSHES, OR VERNAL POOLS. 1-325 M.

Last Date Observed: 1881-10-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1881-10-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

VISALIA.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS IN THE VICINITY OF VISALIA.

Ecological:

Threats:

General:

ONLY SOURCE OF INFORMATION IS AN 1881 CONGDON COLLECTION. NEEDS FIELDWORK. COLLECTION ANNOTATED TO A. DEPRESSA BY ZACHARIAS IN 2010. FORMER ID'S AS A. MINUSCULA OCCURRENCE #11 AND A. SUBTILIS OCCURRENCE #7.

PLSS: T18S, R25E, Sec. 29 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4023417 E293889
Latitude/Longitude: 36.33377 / -119.29640
Elevation (feet):

County Summary:

Tulare

Quad Summary:

Visalia (3611933)

Sources:

CON81S0005 CONGDON, J. - CONGDON SN UC #110267 1881-10-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 82784
EO Index: 83810
Key Quad: Traver (3611944)
Element Code: PDCHE042L0
Occurrence Number: 76
Occurrence Last Updated: 2011-06-06

Scientific Name: *Atriplex depressa*
Common Name: brittlescale

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:

CHENOPOD SCRUB, MEADOWS AND SEEPS, PLAYAS, VALLEY AND FOOTHILL GRASSLAND, VERNAL POOLS.

Micro Habitat:

USUALLY IN ALKALI SCALDS OR ALK. CLAY IN MEADOWS OR ANNUAL GRASSLND; RARELY ASSOCIATED WITH RIPARIAN, MARSHES, OR VERNAL POOLS. 1-325 M.

Last Date Observed: 1968-05-13
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1968-05-13
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

4 MILES S OF DINUBA.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS 4 MILES S OF DINUBA FROM SOUTHERN PACIFIC RAILROAD; MULTIPLE ROADS LEAD S OUT OF DINUBA, CENTERED ON ROAD 80 AND ROAD 84.

Ecological:

Threats:

General:

ONLY SOURCE OF INFORMATION IS A 1968 HOOVER COLLECTION. NEEDS FIELDWORK.

PLSS: T17S, R24E, Sec. 05 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4040025 E285977
Latitude/Longitude: 36.48164 / -119.38907
Elevation (feet):

County Summary:

Tulare

Quad Summary:

Monson (3611943), Traver (3611944)

Sources:

HOO68S0019 HOOVER, R. - HOOVER #11078 OBI (CITED IN TAY93U0002) 1968-05-13

TAY93U0002 TAYLOR, D. - ENDEMIC CA ANNUAL ATRIPLEX RECORDS. (COLLECTIONS FOR SEVERAL TAXA) 1993-07-27

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 56415
EO Index: 56431
Key Quad: Goshen (3611934)
Element Code: PDCHE042M0
Occurrence Number: 14
Occurrence Last Updated: 2011-05-11

Scientific Name: *Atriplex minuscula*
Common Name: lesser saltscale

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 0-225 M.

Last Date Observed: 2002-09-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2002-09-12
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
N SIDE OF AVE 308, 0.4 MILE W OF ROAD 76, GOSHEN.

Detailed Location:
IN FIELD ON N SIDE OF ROAD. MAPPED WITHIN THE SW 1/4 NE 1/4 SECTION 19.

Ecological:
ALKALI GRASSLAND WITH CENTROMADIA PUNGENS, SUAEDA MOQUINII, BASSIA HYSSOPIFOLIA, CUSCUTA CALIFORNICA, AND ANNUAL GRASSES.

Threats:
FIELD DISKED SOMETIME IN PREVIOUS YEAR. NEW HOUSING DEVELOPMENT ADJACENT TO SITE.

General:
25 PLANTS SEEN IN 2002. COLLECTION BY EASTWOOD & HOWELL IN 1938 "NEAR GOSHEN" ATTRIBUTED TO THIS OCCURRENCE.

PLSS: T18S, R24E, Sec. 19, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4025366 E283702
Latitude/Longitude: 36.34909 / -119.41036
Elevation (feet): 290

County Summary:
Tulare

Quad Summary:
Goshen (3611934)

Sources:

EAS38S0037	EASTWOOD, A. & J. HOWELL - EASTWOOD SN RSA #22185 1938-09-05
PRE02F0014	PRESTON, R. - FIELD SURVEY FORM FOR ATRIPLEX MINUSCULA 2002-09-12
PRE02S0007	PRESTON, R. - PRESTON #1947 DAV #77395 2002-09-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 56417
EO Index: 56433
Key Quad: Traver (3611944)
Element Code: PDCHE042M0
Occurrence Number: 15
Occurrence Last Updated: 2011-05-11

Scientific Name: *Atriplex minuscula*
Common Name: lesser saltscale

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 0-225 M.

Last Date Observed: 2002-09-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2002-09-12
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ALONG E SIDE OF ROAD 80, N OF COTTONWOOD CREEK, 7 MILES N OF GOSHEN.

Detailed Location:
MAPPED AS A SERIES OF 3 POLYGONS FROM 51-307 M N OF LEVEE AND ROAD 80 INTERESECTION. IN THE SW 1/4 NE 1/4 SECTION 20.

Ecological:
ROADSIDE DRAINAGE.

Threats:
PROPOSED ROAD WIDENING.

General:
UNKNOWN NUMBER OF PLANTS IN 2000. 3 SMALL PATCHES OF PLANTS EACH ABOUT 900 SQ FT IN AREA SEEN BY PRESTON IN 2002. 1995 STUTZ COLLECTION FROM "5 MILES N OF GOSHEN" ATTRIBUTED TO THIS OCCURRENCE.

PLSS: T17S, R24E, Sec. 20, NE (M)
Accuracy: specific area
Area (acres): 1
UTM: Zone-11 N4035226 E285395
Latitude/Longitude: 36.43828 / -119.39423
Elevation (feet): 285

County Summary:
Tulare

Quad Summary:
Traver (3611944)

Sources:

PRE00F0003	PRESTON, R. - FIELD SURVEY FORM FOR ATRIPLEX ERECTICAULIS (INCLUDES MENTION OF A. MINUSCULA AT THE SITE) 2000-09-22
PRE02F0015	PRESTON, R. - FIELD SURVEY FORM FOR ATRIPLEX MINUSCULA 2002-09-12
STU95S0008	STUTZ, H. - STUTZ #9791 RSA #612717 1995-08-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 56419
EO Index: 56435
Key Quad: Traver (3611944)
Element Code: PDCHE042M0
Occurrence Number: 16
Occurrence Last Updated: 2004-08-18

Scientific Name: *Atriplex minuscula*
Common Name: lesser saltscale

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
CHENOPOD SCRUB, PLAYAS, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
IN ALKALI SINK AND GRASSLAND IN SANDY, ALKALINE SOILS. 0-225 M.

Last Date Observed: 2000-07-10
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2000-07-10
Occurrence Rank: Good
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ALONG ROAD 80 BETWEEN BANKS DITCH AND BUTTON DITCH, S OF DINUBA AND N OF VISALIA.

Detailed Location:
MAPPED AT THE CENTER OF SECTION 17 EXTENDING FROM N TO S OF SECTION.

Ecological:
ANNUAL GRASSLAND COMMUNITY WITH LOLIUM MULTIFLORUM, HORDEUM MARINUM SSP. GUSSONEANUM, HELIOTROPIUM CURASSAVICUM, CRESSA TRUXILLENSIS, AND DISTICHLIS SPICATA. ALSO WITH CAPSELLA BURSA-PASTORIS, XANTHIUM STRUMARIUM, AND RUMEX CRISPUS.

Threats:
ROAD WIDENING.

General:
200 PLANTS SEEN IN 2000. THE RARE ATRIPLEX CORDULATA OR A. ERECTICAULIS MAY ALSO OCCUR AT THIS SITE. SITE NEEDS TO BE REVISITED.

PLSS: T17S, R24E, Sec. 17, E (M)
Accuracy: specific area
Area (acres): 59
UTM: Zone-11 N4036708 E285458
Latitude/Longitude: 36.45164 / -119.39394
Elevation (feet): 290

County Summary:
Tulare

Quad Summary:
Traver (3611944)

Sources:
LEV00F0001 LEVERETT, R. - FIELD SURVEY FORM FOR ATRIPLEX MINUSCULA 2000-07-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 25124
EO Index: 33912
Key Quad: Goshen (3611934)
Element Code: PDCHE042T0
Occurrence Number: 8
Occurrence Last Updated: 2011-05-23

Scientific Name: *Atriplex subtilis*
Common Name: subtle orache

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists: BLM_S-Sensitive

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
ALKALINE SOILS. 20-100 M.

Last Date Observed: 1905-09-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2002-09-12
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:
NEAR RAILROAD STATION, GOSHEN.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS CENTERED ON RAILROAD STATION IN GOSHEN.

Ecological:

Threats:
SURROUNDING LAND USE RESIDENTIAL OR COMMERCIAL. PRESTON STATES THAT LITTLE SUITABLE HABITAT REMAINS HERE.

General:
SITE BASED ON A 1905 BRANDEGEE COLLECTION. LISTED AS A. SUBTILIS BY STUTZ & CHU IN 1997 AND ANNOTATED TO A. SUBTILIS BY ZACHARIAS IN 2010. PLANTS NOT OBSERVED BY PRESTON IN 2002.

PLSS: T18S, R24E, Sec. 19 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4025373 E282725
Latitude/Longitude: 36.34893 / -119.42124
Elevation (feet): 285

County Summary:
Tulare

Quad Summary:
Goshen (3611934)

Sources:

BRA05S0005	BRANDEGEE, K. - BRANDEGEE SN UC #110268 1905-09-01
PRE02F0016	PRESTON, R. - FIELD SURVEY FORM FOR ATRIPLEX SUBTILIS 2002-09-12
STU97A0001	STUTZ, H. & G. CHU - ATRIPLEX SUBTILIS: A NEW SPECIES FROM SOUTH-CENTRAL CALIFORNIA (IN MADRONO 44(2) PP. 184-188) 1997-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 47221
EO Index: 47221
Key Quad: Traver (3611944)
Element Code: PDCHE042V0
Occurrence Number: 16
Occurrence Last Updated: 2013-08-07

Scientific Name: *Atriplex cordulata var. erecticaulis*
Common Name: Earlimart orache

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists: BLM_S-Sensitive

CNDDB Element Ranks: **Global:** G3T1
State: S1

General Habitat:
VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
60-115 M.

Last Date Observed: 2002-09-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2002-09-12
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
7 MILES NORTH OF GOSHEN ON EAST SIDE OF ROAD 80, NORTH OF COTTONWOOD CREEK.

Detailed Location:
JUST SOUTH TO 0.5 MILE SOUTH OF AVENUE 360.

Ecological:
IN DRAINAGE CHANNEL; DISTURBED AREAS IN ALKALI GRASSLAND WITH SUAEDA MOQUINII, DISTICHLIS SPICATA, CRESSA TRUXILLENSIS, CENTROMADIA PUNGENS, HELIOTROPIUM CURASSAVICUM, FRANKENIA SALINA, A. SERENANA, CYNODON DACTYLON & ANNUAL GRASSES.

Threats:
WIDENING OF ROAD 80.

General:
1000'S OF PLANTS ESTIMATED IN 2000. 100'S OF PLANTS OBSERVED IN 2002; FEWER PLANTS PROBABLY DUE TO DROUGHT YEAR. ALKALI GRASSLAND IN THE VICINITY OF COTTONWOOD CREEK IS LIKELY SEED SOURCE. THE RARE A. MINUSCULA OBSERVED HERE IN 2000.

PLSS: T17S, R24E, Sec. 20, NE (M)
Accuracy: specific area
Area (acres): 13
UTM: Zone-11 N4035389 E285400
Latitude/Longitude: 36.43975 / -119.39421
Elevation (feet): 285

County Summary:
Tulare

Quad Summary:
Traver (3611944)

Sources:

PRE00F0003	PRESTON, R. - FIELD SURVEY FORM FOR ATRIPLEX ERECTICAULIS (INCLUDES MENTION OF A. MINUSCULA AT THE SITE) 2000-09-22
PRE00S0041	PRESTON, R. - PRESTON #1441 DAV #77390 2000-09-06
PRE02F0032	PRESTON, R. - FIELD SURVEY FORM FOR ATRIPLEX ERECTICAULIS 2002-09-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15561
EO Index: 18740
Key Quad: Monson (3611943)
Element Code: PDEUP0D150
Occurrence Number: 12
Occurrence Last Updated: 2013-05-24

Scientific Name: *Euphorbia hooveri*
Common Name: Hoover's spurge

Listing Status: **Federal:** Threatened
Rare Plant Rank: 1B.2
State: None
Other Lists:

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VERNAL POOLS.

Micro Habitat:
VERNAL POOLS ON VOLCANIC MUDFLOW OR CLAY SUBSTRATE. 25-130 M.

Last Date Observed: 1941-07-26
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2010-08-05
Occurrence Rank: None
Owner/Manager: PVT
Trend: Unknown
Presence: Extirpated

Location:
DRIED-UP "HOG WALLOW" ALONG DINUBA BLVD, 8 MILES NORTH OF VISALIA CITY LIMITS.

Detailed Location:
MAPPED ALONG DINUBA BLVD AT MILEAGE GIVEN; EXACT LOCATION UNKNOWN.

Ecological:
VERNAL POOL.

Threats:
ENTIRE AREA NOW ORCHARDS OR HOMES.

General:
OCCURRENCE IS BASED ON A 1941 BACIGALUPI COLLECTION. NO PLANTS SEEN IN 1986 OR 2011; HABITAT ELIMINATED, SITE EXTIRPATED.

PLSS: T17S, R25E, Sec. 17, W (M)
Accuracy: nonspecific area
Area (acres): 111
UTM: Zone-11 N4035723 E294259
Latitude/Longitude: 36.44470 / -119.29555
Elevation (feet): 327

County Summary:
Tulare

Quad Summary:
Monson (3611943)

Sources:

BAC41S0001	BACIGALUPI, R., ET AL. - BACIGALUPI #2500 POM #266149, UC #676710, UCR #51836, CAS #318208, DS #288457, GH #347538 1941-07-26
BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
HUB86U0012	HUBBARD, T. - ELEMENT OCCURRENCE EVALUATION FORM FOR CHAMAESYCE HOOVERI 1986-06-24
HUB87U0001	HUBBARD, T. - ELEMENT CONSERVATION PLAN 1987-01-XX
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	89295	**EO Index:**	2447
Key Quad:	Monson (3611943)	**Element Code:**	PDEUP0D150
Occurrence Number:	25	**Occurrence Last Updated:**	2013-05-28

Scientific Name: *Euphorbia hooveri* **Common Name:** Hoover's spurge

Listing Status: **Federal:** Threatened **Rare Plant Rank:** 1B.2

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

VERNAL POOLS.

Micro Habitat:

VERNAL POOLS ON VOLCANIC MUDFLOW OR CLAY SUBSTRATE. 25-130 M.

Last Date Observed:	2011-06-06	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-06-06	**Occurrence Rank:**	Good
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Stable
Presence:	Presumed Extant		

Location:

BETWEEN 0.4 AND 1 AIR MILE SOUTHWEST OF SEQUOIA FIELD, NORTH OF VISALIA.

Detailed Location:

SITE ONCE ON PRIVATE LAND, NOW PART OF STONE CORRAL ECOLOGICAL RESERVE. 5 POLYGONS MAPPED ACCORDING TO A 1997 WOODWARD-CLYDE MAP AND 2009 & 2012 DIGITAL DATA FROM DFG.

Ecological:

VERNAL POOLS SURROUNDED BY ANNUAL GRASSLAND. ASSOCIATED WITH EREMOCARPUS, POLYPOGON, SIDA, HORDEUM GENICULATUM, ERYNGIUM SPINOSEPALUM, DISTICHLIS SPICATA, LILAEA SCILLOIDES, HEMIZONIA PUNGENS, AND ANTHOXANTHUM ODORATUM.

Threats:

CATTLE GRAZING IN WINTER PASTURE AND POTENTIAL CONVERSION TO IRRIGATED AGRICULTURE (1986, 1992).

General:

2 SE POLYS: >10,000 PLANTS IN 1986, SEVERAL THOUSAND IN 1992, HABITAT PRESENT BUT NO PLANTS FOUND IN 2010 & 2011. 3 NW POLYS: 50 PLANTS IN 1992, UNK # IN 1997, HUNDREDS IN 2005, 1 PLANT IN 2010, 50 PLANTS IN 2011. INCLUDES FORMER EO #31.

PLSS:	T17S, R25E, Sec. 19, W (M)	**Accuracy:**	specific area	**Area (acres):**	21
UTM:	Zone-11 N4034835 E292842	**Latitude/Longitude:**	36.43640 / -119.31111	**Elevation (feet):**	315

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
DFG12U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - LANDS UNIT - EXCEL TABLE OF RARE SPECIES OBSERVED ON CALIFORNIA DEPARTMENT OF FISH AND GAME PROPERTIES 2012-XX-XX
STO86S0085	STONE, R. - STONE #697 JEPS #83931 SD #131831 1986-06-05
TEN09D0001	TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02
YOR97F0002	YORK, D. ET AL. - FIELD SURVEY FORM FOR CHAMAESYCE HOOVERI & ORCUTTIA INAEQUALIS 1997-06-19
YOR97S0002	YORK, D. - YORK #1886 JEPS #96216 RSA #602251 1997-06-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	37051	**EO Index:**	32048
Key Quad:	Monson (3611943)	**Element Code:**	PDEUP0D150
Occurrence Number:	32	**Occurrence Last Updated:**	2013-05-29

Scientific Name: *Euphorbia hooveri* **Common Name:** Hoover's spurge

Listing Status: **Federal:** Threatened **Rare Plant Rank:** 1B.2

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

VERNAL POOLS.

Micro Habitat:

VERNAL POOLS ON VOLCANIC MUDFLOW OR CLAY SUBSTRATE. 25-130 M.

Last Date Observed:	2010-08-05	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2010-08-05	**Occurrence Rank:**	Fair
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

AIR CHIEF UNIT OF DFG STONE CORRAL ECOLOGICAL RESERVE, ABOUT 1.2 AIR MILES NNW OF TAURUSA SCHOOL.

Detailed Location:

2 POLYGONS MAPPED IN THE SW 1/4 OF SE 1/4 OF SECTION 16 ACCORDING TO 2013 WITHAM DIGITAL DATA.

Ecological:

POOLS WITH ERYNGIUM, XANTHIUM SPINOSUM, EREMOCARPUS, TRICHOSTEMMA, CRYPSIS, MARSILEA, & PSILOCARPHUS.

Threats:

THREATENED BY LAND CONVERSION, EXCESS IRRIGATION RUNOFF, AND UNDERGRAZING.

General:

MORE THAN 800 PLANTS SEEN IN 3 POOLS IN 1992. 25 PLANTS SEEN IN WESTERN POLYGON AND 1000 PLANTS SEEN IN EASTERN POLYGON IN 2010.

PLSS:	T17S, R25E, Sec. 16, SE (M)	**Accuracy:**	specific area	**Area (acres):**	2
UTM:	Zone-11 N4035715 E296881	**Latitude/Longitude:**	36.44518 / -119.26630	**Elevation (feet):**	335

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 58384
EO Index: 58420
Key Quad: Monson (3611943)
Element Code: PDRAN0B1J0
Occurrence Number: 83
Occurrence Last Updated: 2004-12-08

Scientific Name: *Delphinium recurvatum*
Common Name: recurved larkspur

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists: BLM_S-Sensitive

CNDDB Element Ranks: **Global:** G2?
State: S2?

General Habitat:

CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro Habitat:

ON ALKALINE SOILS; OFTEN IN VALLEY SALTBUSH OR VALLEY CHENOPOD SCRUB. 3-790 M.

Last Date Observed: 1998-04-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1998-04-08
Occurrence Rank: Unknown
Owner/Manager: DFG-STONE CORRAL ER
Trend: Unknown
Presence: Presumed Extant

Location:

STONE CORRAL FISH AND GAME ECOLOGICAL RESERVE, NEAR SEQUOIA FIELD (AIRFIELD), ABOUT 13 KM NORTH OF VISALIA.

Detailed Location:

MAPPED WITHIN THE SW 1/4 OF THE SE 1/4 OF SECTION 18.

Ecological:

GROWING IN ALKALINE SOIL IN AN ANNUAL GRASSLAND. ASSOCIATES: AMSINCKIA MENZIESII VAR. INTERMEDIA, AVENA BARBATA, BROMUS SPP., DELPHINIUM HANSENII SSP. EWANIANUM, DICHELOSTEMMA CAPITATUM, HEMIZONIA PUNGENS, HORDEUM DEPRESSUM, ET AL.

Threats:

General:

SEVERAL HUNDRED PLANTS OBSERVED HERE BY YORK IN 1998. MATERIAL FOR GENETIC STUDIES COLLECTED FOR J. KOONTZ.

PLSS: T17S, R25E, Sec. 18, SE (M)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-11 N4035763 E293750
Latitude/Longitude: 36.44495 / -119.30123
Elevation (feet): 320

County Summary:	Quad Summary:
Tulare	Monson (3611943)

Sources:

YOR98S0002 YORK, D. - YORK #2086 CAS #1119542, JEPS #118799 1998-04-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 24419
EO Index: 69849
Key Quad: Visalia (3611933)
Element Code: PMPOA3D020
Occurrence Number: 19
Occurrence Last Updated: 2016-11-28

Scientific Name: *Imperata brevifolia*
Common Name: California satintail

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 2B.1
Other Lists: SB_SBBG-Santa Barbara Botanic Garden
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G4
State: S3

General Habitat:

COASTAL SCRUB, CHAPARRAL, RIPARIAN SCRUB, MOJAVEAN DESERT SCRUB, MEADOWS AND SEEPS (ALKALI), RIPARIAN SCRUB.

Micro Habitat:

MESIC SITES, ALKALI SEEPS, RIPARIAN AREAS. 3-1495 M.

Last Date Observed: 1895-08-19
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1895-08-19
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

VISALIA.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS A BEST GUESS IN VISALIA.

Ecological:

Threats:

General:

ONLY SOURCES OF INFORMATION FOR THIS OCCURRENCE ARE 1881 CONGDON COLLECTIONS, AND AN 1895 DUDLEY COLLECTION. NEEDS FIELDWORK.

PLSS: T18S, R25E, Sec. 29 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4023417 E293889
Latitude/Longitude: 36.33377 / -119.29640
Elevation (feet): 300

County Summary:	Quad Summary:
Tulare	Visalia (3611933)

Sources:

CON81S0004	CONGDON, J. - CONGDON SN UC #120585 1881-10-XX
CON81S0010	CONGDON, J. - CONGDON SN UC #38683, DS #60450 1881-09-XX
DUD95S0014	DUDLEY, W. - DUDLEY #1336 DS #60449 1895-08-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 69074
EO Index: 69850
Key Quad: Reedley (3611954)
Element Code: PMPOA3D020
Occurrence Number: 20
Occurrence Last Updated: 2007-04-25

Scientific Name: *Imperata brevifolia*
Common Name: California satintail

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 2B.1
Other Lists: SB_SBBG-Santa Barbara Botanic Garden
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G4
State: S3

General Habitat:

COASTAL SCRUB, CHAPARRAL, RIPARIAN SCRUB, MOJAVEAN DESERT SCRUB, MEADOWS AND SEEPS (ALKALI), RIPARIAN SCRUB.

Micro Habitat:

MESIC SITES, ALKALI SEEPS, RIPARIAN AREAS. 3-1495 M.

Last Date Observed: 1933-09-05
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1933-09-05
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

CANAL BANK NEAR REEDLEY.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS A BEST GUESS AROUND REEDLEY.

Ecological:

Threats:

General:

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1933 COLLECTION BY BURG. NEEDS FIELDWORK.

PLSS: T15S, R23E, Sec. 27 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4052782 E280743
Latitude/Longitude: 36.59535 / -119.45107
Elevation (feet): 300

County Summary:

Fresno

Quad Summary:

Reedley (3611954)

Sources:

BUR33S0001 BURG, A. - BURG SN FSC (CITED IN HRU04U0001) 1933-09-05

HRU04U0001 HRUSA, G. - SUMMARY OF COLLECTIONS OF IMPERATA BREVIFOLIA FROM SEVERAL HERBARIA 2004-01-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	40390	**EO Index:**	35397
Key Quad:	Monson (3611943)	**Element Code:**	PMPOA4G060
Occurrence Number:	56	**Occurrence Last Updated:**	2013-05-15

Scientific Name: *Orcuttia inaequalis* **Common Name:** San Joaquin Valley Orcutt grass

Listing Status: **Federal:** Threatened **Rare Plant Rank:** 1B.1

State: Endangered **Other Lists:**

CNDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

VERNAL POOLS.

Micro Habitat:

10-755 M.

Last Date Observed:	2011-06-06	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-06-06	**Occurrence Rank:**	Fair
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SSE OF SEQUOIA FIELD (AIRPORT), ABOUT 0.6 MI NORTH OF 12TH AVE AND 1 MI EAST OF DINUBA BLVD (HWY 63), NORTH OF VISALIA.

Detailed Location:

STONE CORRAL ECOLOGICAL RESERVE. MAPPED WITHIN THE SW 1/4 OF THE NW 1/4 SECTION 19 ACCORDING TO 2013 WITHAM DIGITAL DATA.

Ecological:

VERNAL POOL WITH CHAMAESYCE HOOVERI, CRYPSIS, DISTICHLIS SPICATA, DOWNINGIA CUSPIDATA, HORDEUM DEPRESSUM, LILAEA SCILLOIDES, AND POLYPOGON MONSPELIENSIS. ADJACENT UPLAND DOMINATED BY ANNUAL GRASSES; POOL IS MOSTLY FREE OF EXOTIC PLANTS.

Threats:

General:

250 PLANTS SEEN IN 1997, NONE SEEN IN 2005, FEWER THAN 100 PLANTS SEEN IN 2006, NONE SEEN IN 2009 & 2010, ~1,000 PLANTS SEEN IN 2011. LONG-TERM VIABILITY QUESTIONED DUE TO SMALL SIZE OF PRESERVE.

PLSS:	T17S, R25E, Sec. 19, NW (M)	**Accuracy:**	specific area	**Area (acres):**	1
UTM:	Zone-11 N4034940 E292741	**Latitude/Longitude:**	36.43732 / -119.31225	**Elevation (feet):**	315

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

DFG12U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - LANDS UNIT - EXCEL TABLE OF RARE SPECIES OBSERVED ON CALIFORNIA DEPARTMENT OF FISH AND GAME PROPERTIES 2012-XX-XX
TEN09D0001	TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25
YOR97F0002	YORK, D. ET AL. - FIELD SURVEY FORM FOR CHAMAESYCE HOOVERI & ORCUTTIA INAEQUALIS 1997-06-19
YOR97S0001	YORK, D. - YORK #1887 JEPS #96217, RSA #602341 1997-06-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 25124
EO Index: 100163
Key Quad: Goshen (3611934)
Element Code: PMPOA53110
Occurrence Number: 14
Occurrence Last Updated: 2016-01-22

Scientific Name: *Puccinellia simplex*
Common Name: California alkali grass

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G3
State: S2

General Habitat:

MEADOWS AND SEEPS, CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLANDS, VERNAL POOLS.

Micro Habitat:

ALKALINE, VERNALLY MESIC. SINKS, FLATS, AND LAKE MARGINS. 1-915 M.

Last Date Observed: 1925-03-24
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1925-03-24
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:

GOSHEN.

Detailed Location:

EXACT LOCATION UNKNOWN, MAPPED IN GENERAL VICINITY OF GOSHEN.

Ecological:

ALKALI.

Threats:

POSSIBLY EXTIRPATED BY DEVELOPMENT AND AGRICULTURAL CONVERSION BASED ON AERIAL IMAGERY OF THE AREA.

General:

SITE IS BASED ON A 1914 EASTWOOD COLLECTION FROM GOSHEN AND A 1925 ABRAMS COLLECTION FROM "TRAVERS TO GOSHEN." REMAINING HABITAT IN THIS AREA SHOULD BE SEARCHED.

PLSS: T18S, R24E, Sec. 19 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4025373 E282725
Latitude/Longitude: 36.34893 / -119.42124
Elevation (feet):

County Summary:	Quad Summary:
Tulare	Goshen (3611934)

Sources:

ABR25S0004	ABRAMS, L. - ABRAMS #10794 DAV #92068 1925-03-24
EAS14S0006	EASTWOOD - EASTWOOD SN HERBARIUM UNKNOWN (CITED IN HOO37R0001) 1914-03-26
HOO37R0001	HOOVER, R. - ENDEMISM IN THE FLORA OF THE GREAT VALLEY OF CALIFORNIA. DISSERTATION FOR PHD, UNIVERSITY OF CALIFORNIA. 1937-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 98703
EO Index: 100164
Key Quad: Remnoy (3611935)
Element Code: PMPOA53110
Occurrence Number: 15
Occurrence Last Updated: 2016-01-22

Scientific Name: *Puccinellia simplex*
Common Name: California alkali grass

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G3
State: S2

General Habitat:
MEADOWS AND SEEPS, CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLANDS, VERNAL POOLS.

Micro Habitat:
ALKALINE, VERNALLY MESIC. SINKS, FLATS, AND LAKE MARGINS. 1-915 M.

Last Date Observed: 1942-04-11
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1942-04-11
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
2 MILES EAST OF HANFORD.

Detailed Location:
EXACT LOCATION UNKNOWN, MAPPED BY CNDDB AS A BEST GUESS.

Ecological:
ALKALINE SOIL, DRYING MUD FLAT ASSOC WITH DISTICHLIS SPICATA AND POLYPOGON MONSPELIENSIS.

Threats:
POSSIBLY EXTIRPATED BY DEVELOPMENT AND AGRICULTURAL CONVERSION BASED ON AERIAL IMAGERY OF THE AREA.

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1942 BEETLE COLLECTION. REMAINING HABITAT IN THIS AREA SHOULD BE SEARCHED.

PLSS: T18S, R22E, Sec. 29 (M)
Accuracy: 1 mile
Area (acres): 1,987
UTM: Zone-11 N4023842 E266501
Latitude/Longitude: 36.33134 / -119.60142
Elevation (feet): 250

County Summary:
Kings

Quad Summary:
Remnoy (3611935)

Sources:
BEE42S0006 BEETLE, A. - BEETLE #2963 DAV #92071 1942-04-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15561
Key Quad: Monson (3611943)
Occurrence Number: 16
EO Index: 100166
Element Code: PMPOA53110
Occurrence Last Updated: 2016-01-22

Scientific Name: *Puccinellia simplex*
Common Name: California alkali grass

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G3
State: S2

General Habitat:

MEADOWS AND SEEPS, CHENOPOD SCRUB, VALLEY AND FOOTHILL GRASSLANDS, VERNAL POOLS.

Micro Habitat:

ALKALINE, VERNALLY MESIC. SINKS, FLATS, AND LAKE MARGINS. 1-915 M.

Last Date Observed: 1936-04-10
Last Survey Date: 1936-04-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

8 MILES NORTH OF VISALIA.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB ALONG HIGHWAY 63 AROUND 8 ROAD MILES NORTH OF VISALIA.

Ecological:

Threats:

AREA HAS BEEN HIGHLY MODIFIED BY AGRICULTURAL CONVERSION BASED ON 2015 AERIAL IMAGERY OF AREA; SOME HABITAT REMAINS.

General:

ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1936 HOOVER COLLECTION CITED IN HIS 1937 DISSERTATION. REMAINING HABITAT IN THIS AREA SHOULD BE SEARCHED.

PLSS: T17S, R25E, Sec. 17 (M)
Accuracy: nonspecific area
Area (acres): 111
UTM: Zone-11 N4035723 E294259
Latitude/Longitude: 36.44470 / -119.29555
Elevation (feet): 320

County Summary:	Quad Summary:
Tulare	Monson (3611943)

Sources:

HOO36S0065	HOOVER - HOOVER #914 HERBARIUM UNKNOWN (CITED IN HOO37R0001) 1936-04-10
HOO37R0001	HOOVER, R. - ENDEMISM IN THE FLORA OF THE GREAT VALLEY OF CALIFORNIA. DISSERTATION FOR PHD, UNIVERSITY OF CALIFORNIA. 1937-XX-XX

OCCURRENCE REPORT (EXPANDED)

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Selma (3611955) OR Reedley (3611954) OR Orange Cove South (3611953) OR Burris Park (3611945) OR Traver (3611944) OR Monson (3611943) OR Remnoy (3611935) OR Goshen (3611934) OR Visalia (3611933))
 AND Taxonomic Group IS (Dune OR Scrub OR Herbaceous OR Marsh OR Riparian OR Woodland OR Forest OR Alpine OR Inland Waters OR Marine OR Estuarine OR Riverine OR Palustrine OR Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes OR Fungi)
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate) OR State Listing Status IS (Endangered OR Threatened OR Rare OR Candidate Endangered OR Candidate Threatened))

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15551
EO Index: 28435
Key Quad: Orange Cove North (3611963)
Element Code: AAAAA01180
Occurrence Number: 12
Occurrence Last Updated: 1995-12-19

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: 1952-05-19
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1952-05-19
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:

0.5 MI E, 0.75 MI NE ORANGE COVE.

Detailed Location:

Ecological:

ALL HABITAT IN SECTION 7 HAS BEEN ELIMINATED BY CONVERSION TO INTENSIVE AGRICULTURE; SOME VIABLE HABITAT OF NON-NATIVE GRASSLAND AND NORTHERN HARDPAN VERNAL POOLS EXIST APPROX 0.5 MILE NW IN S 1/2 OF SECTION 5.

Threats:

CONVERSION OF LAND USE FROM GRAZING TO INTENSIVE AGRICULTURE FOR CITRUS.

General:

OBSERVED BY L. DUNN, 1952. (L. DUNN 756).

PLSS: T15S, R25E, Sec. 07 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4057155 E294063
Latitude/Longitude: 36.63772 / -119.30345
Elevation (feet): 440

County Summary:

Fresno, Tulare

Quad Summary:

Orange Cove South (3611953), Orange Cove North (3611963)

Sources:

BRO80U0001	BRODE, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - GEOGRAPHIC REFERENCE CARD CATALOG OF SPECIMENS AND FIELD NOTE RECORDS COMPILED BY JOHN BRODE (DFG) 1980-XX-XX
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 32739
EO Index: 7033
Key Quad: Monson (3611943)
Element Code: AAAAA01180
Occurrence Number: 355
Occurrence Last Updated: 2002-06-05

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: 2002-03-19
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2002-03-19
Occurrence Rank: Unknown
Owner/Manager: DFG-STONE CORRAL ER
Trend: Unknown
Presence: Presumed Extant

Location:

STONE CORRAL ECOLOGICAL RESERVE, 0.8 MILE SSE OF SEQUOIA FIELD, 0.35 MILE N OF 12TH AVENUE, 0.8 MILE EAST OF ROAD 112.

Detailed Location:

Ecological:

HABITAT VARIES FROM LARGE, STEEP-SIDED POOLS TO SMALLER, SHALLOW-SIDED POOLS. UPPER SECTION IS A VERNAL POOL COMPLEX, SURROUNDED BY NON-NATIVE GRASSLAND AND AGRICULTURE. OTHER SPECIES OBS: SPADEFOOT TOAD, VP TADPOLE SHRIMP.

Threats:

THREATENED BY AGRICULTURAL CONVERSION, DEVELOPMENT, AND GRAZING.

General:

CTS OBSERVED ON 22 FEB AND 12 APR 1992. 4 JUVENILES OBSERVED MAR 2000. 2 JUVENILES OBSERVED ON 19 MAR 2002. 2007 AERIAL PHOTO SHOWS ENCROACHING AG OUTSIDE THE ECO RESERVE BOUNDARIES.

PLSS: T17S, R25E, Sec. 19, SW (M)
Accuracy: specific area
Area (acres): 118
UTM: Zone-11 N4034710 E293011
Latitude/Longitude: 36.43531 / -119.30919
Elevation (feet): 315

County Summary:	Quad Summary:
Tulare	Monson (3611943)

Sources:

NEW02F0002	NEWMAN, D. - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2002-03-19
TIB00F0001	TIBSTRA, R. - 4 FIELD SURVEY FORMS FOR AMBYSTOMA CALIFORNIENSE (CALIFORNIA TIGER SALAMANDER) 2000-03-17
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	32754	**EO Index:**	22622
Key Quad:	Monson (3611943)	**Element Code:**	AAAAA01180
Occurrence Number:	356	**Occurrence Last Updated:**	1996-01-29

Scientific Name: *Ambystoma californiense*

Common Name: California tiger salamander

Listing Status: **Federal:** Threatened

State: Threatened

Rare Plant Rank:

Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3

State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed:	1993-02-23	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-02-23	**Occurrence Rank:**	Unknown
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST OF SEQUOIA FIELD, 0.6 MILE SOUTH OF ELKHORN AVENUE, 0.6 MILE WEST OF HIGHWAY 63 (DINUBA BLVD).

Detailed Location:

WAS HETTICK PROPERTY, NOW PART OF STONE CORRAL ER.

Ecological:

SMALL TRIANGULAR SHAPED POOL, 11 INCHES DEEP, 65 DEGREES FAHRENHEIT, PH 7.3, CLEAR TEA-COLORED WATER WITH LOTS OF EMERGENT VEGETATION AND FILAMENTOUS ALGAE. 2007 AERIAL PHOTO SHOWS ENCROACHING AG OUTSIDE THE ECO RESERVE BOUNDARIES.

Threats:

CURRENT LAND USE: LIVESTOCK GRAZING; THREAT INCLUDES: LAND CONVERSION.

General:

A. CALIFORNIENSE, BRANCHINECTA LYNCHI AND TADPOLE SHRIMP (LEPIDURUS COUESII) OBSERVED BY G. KIRKPATRICK.

PLSS:	T17S, R25E, Sec. 18, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4036231 E293366	**Latitude/Longitude:**	36.44909 / -119.30564	**Elevation (feet):**	317

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

WOO93R0002 WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR VERNAL POOL FAIRY SHRIMP (BRANCHINECTA LYNCHI) IN TULARE COUNTY, CALIFORNIA. 1993-09-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 32755
EO Index: 7030
Key Quad: Monson (3611943)
Element Code: AAAAA01180
Occurrence Number: 357
Occurrence Last Updated: 2012-06-18

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: 2011-03-10
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2011-03-10
Occurrence Rank: Good
Owner/Manager: DFG-STONE CORRAL ER
Trend: Unknown
Presence: Presumed Extant

Location:

STONE CORRAL ECOLOGICAL RESERVE, SE OF SEQUOIA FIELD, 6 MILES NW OF IVANHOE.

Detailed Location:

SEQUOIA FIELD UNIT OF STONE CORRAL ER.

Ecological:

LARGE, SHALLOW ALKALI PLAYA TYPE POOL; VERY HIGH TURBIDITY & NO EMERGENT VEGETATION. ABOUT 50 M DIAMETER POOL. 1994-2010 AIR PHOTOS SHOW SURROUNDING LAND CONVERTED TO AGRICULTURE, LIKELY LIMITING DISPERSAL AND IMMIGRATION.

Threats:

POSSIBLE THREAT OF OVER-GRAZING. THIS POOL RECENTLY (2005) FENCED.

General:

LARVAE OBSERVED ON 23 FEB 1993. 1 LARVA OBSERVED ON 25 MAR 2005. LARVAE FOUND DEAD & DECAYING 28 FEB 2008. 2 JUVENILES FOUND 10 MAR 2011 DURING WATER QUALITY TESTING.

PLSS: T17S, R25E, Sec. 18, SW (M)
Accuracy: specific area
Area (acres): 1
UTM: Zone-11 N4035693 E293122
Latitude/Longitude: 36.44419 / -119.30821
Elevation (feet): 314

County Summary:

Tulare

Quad Summary:

Monson (3611943)

Sources:

DFG12U0003	CALIFORNIA DEPARTMENT OF FISH & GAME - LANDS UNIT - EXCEL TABLE OF RARE SPECIES OBSERVED ON CALIFORNIA DEPARTMENT OF FISH AND GAME PROPERTIES 2012-XX-XX
SOU05F0004	SOUSA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2005-03-25
TEN09D0001	TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19
WOO93R0002	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR VERNAL POOL FAIRY SHRIMP (BRANCHINECTA LYNCHI) IN TULARE COUNTY, CALIFORNIA. 1993-09-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 32756
EO Index: 1334
Key Quad: Monson (3611943)
Element Code: AAAAA01180
Occurrence Number: 358
Occurrence Last Updated: 1996-01-29

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: 1993-02-23
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1993-02-23
Occurrence Rank: Unknown
Owner/Manager: DFG-STONE CORRAL ER
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTHEAST OF SEQUOIA FIELD; 1.2 KM EAST OF SEQUOIA HOME.

Detailed Location:

WAS HETTICK PROPERTY, NOW PART OF STONE CORRAL ER.

Ecological:

LARGE, L-SHAPED, SHALLOW, ALKALI PLAYA TYPE POOL; VERY HIGH TURBIDITY; NO EMERGENT VEGETATION. 2007 AERIAL PHOTO SHOWS ENCROACHING AG OUTSIDE THE ECO RESERVE BOUNDARIES.

Threats:

CURRENT LAND USE: LIVESTOCK GRAZING; THREATS INCLUDE: LAND CONVERSION.

General:

LARVAE OBSERVED BY G. KIRKPATRICK.

PLSS: T17S, R25E, Sec. 18, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4035802 E293277
Latitude/Longitude: 36.44520 / -119.30651
Elevation (feet): 315

County Summary:	Quad Summary:
Tulare	Monson (3611943)

Sources:

WOO93R0002 WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR VERNAL POOL FAIRY SHRIMP (BRANCHINECTA LYNCHI) IN TULARE COUNTY, CALIFORNIA. 1993-09-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 44980
EO Index: 44980
Key Quad: Burris Park (3611945)
Element Code: AAAAA01180
Occurrence Number: 522
Occurrence Last Updated: 2009-06-18

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: 1999-03-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1999-03-01
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF CROSS CREEK, 1.3 MILES SOUTH OF SETTLERS DITCH, NW OF VSALIA.

Detailed Location:

Ecological:

1999: NON-NTIVE ANNUAL GRASSLAND W/VERNAL POOLS; GRASSLAND TO S & E, FARMLAND TO N & W. SCAPHIOPUS HAMMONDI, BRANCHINETA LYNCHI, LEPIDURUS PACKARDI, & ATHENE CUNICULARIA FOUND IN VICINITY. 2007 AERIAL PHOTO SHOWS AREAS TO S & E ARE NOW AG.

Threats:

POSSIBLE THREAT OF DEVELOPMENT ON SURROUNDING FARMLAND.

General:

SEVERAL EGG MASSES OBSERVED ON 1 MAR 1999.

PLSS: T18S, R23E, Sec. 08, W (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4028791 E274936
Latitude/Longitude: 36.37793 / -119.50895
Elevation (feet): 260

County Summary:

Kings

Quad Summary:

Burris Park (3611945)

Sources:

HAL99F0009 HALSTEAD, J.A. & P.S. HALSTEAD - FIELD SURVEY FORM FOR AMBYSTOMA (TIGRINUM) CALIFORNIENSE 1999-03-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 46426
EO Index: 46426
Key Quad: Burris Park (3611945)
Element Code: AAAAA01180
Occurrence Number: 612
Occurrence Last Updated: 2001-11-07

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: XXXX-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: XXXX-XX-XX
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Extirpated

Location:

LOCATION GIVEN ONLY AS KINGS RIVER BELOW KINGSBURG IN KINGS COUNTY.

Detailed Location:

Ecological:

Threats:

General:

COLLECTION / OBSERVATION SOMETIME BEFORE 1925. JENNINGS CONSIDERS THIS SITE EXTIRPATED.

PLSS: T17S, R22E, Sec. 11 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4039456 E271818
Latitude/Longitude: 36.47325 / -119.54682
Elevation (feet): 275

County Summary:	Quad Summary:
Kings	Burris Park (3611945)

Sources:

JEN01U0001	JENNINGS, M. (RANA RESOURCES) - LOCALITY RECORDS FOR AMBYSTOMA CALIFORNIENSE IN CALIFORNIA 1992 JENNINGS & HAYES SPECIAL CONCERN HERP DATABASE WITH LOCATIONS MARKED AS PRESENT OR EXTIRPATED. 2001-11-07
JEN94U0001	JENNINGS, M. & M. HAYES - COMPUTER PRINT-OUT OF ALL OF THE POINT DATA FOR TIGER SALAMANDER USED IN THE REPORT "REPTILE AND AMPHIBIAN SPECIES OF SPECIAL CONCERN IN CALIFORNIA" 1994-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 62195
EO Index: 67388
Key Quad: Orange Cove North (3611963)
Element Code: AAAAA01180
Occurrence Number: 902
Occurrence Last Updated: 2006-11-28

Scientific Name: *Ambystoma californiense*
Common Name: California tiger salamander

Listing Status: **Federal:** Threatened
State: Threatened
Rare Plant Rank:
Other Lists: CDFW_WL-Watch List
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3
State: S2S3

General Habitat:

CENTRAL VALLEY DPS FEDERALLY LISTED AS THREATENED. SANTA BARBARA AND SONOMA COUNTIES DPS FEDERALLY LISTED AS ENDANGERED.

Micro Habitat:

NEED UNDERGROUND REFUGES, ESPECIALLY GROUND SQUIRREL BURROWS, AND VERNAL POOLS OR OTHER SEASONAL WATER SOURCES FOR BREEDING.

Last Date Observed: 2006-04-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2006-05-23
Occurrence Rank: Excellent
Owner/Manager: PVT-WILDLANDS INC
Trend: Unknown
Presence: Presumed Extant

Location:

SAND CREEK CONSERVATION BANK, NORTH AND SOUTH OF SAND CREEK DRIVE, EAST OF ROAD 132, EAST OF ORANGE COVE.

Detailed Location:

527-ACRE SAND CREEK CONSERVATION BANK CONTAINS ABOUT 23 ACRES OF NATURAL-OCCURRING VERNAL POOLS AND VERNAL SWALES.

Ecological:

HABITAT CONSISTS OF NATURAL-OCCURRING VERNAL POOLS.

Threats:

General:

10 ADULTS AND 10 JUVENILES OBSERVED ON 14 APR 2006; OBSERVATIONS OF CTS WERE INCIDENTAL WHILE CONDUCTING A VERNAL POOL INVERTEBRATE SURVEY.

PLSS: T15S, R25E, Sec. 16 (M)
Accuracy: nonspecific area
Area (acres): 581
UTM: Zone-11 N4055958 E297728
Latitude/Longitude: 36.62772 / -119.26217
Elevation (feet): 420

County Summary:

Tulare

Quad Summary:

Orange Cove South (3611953), Tucker Mtn. (3611962), Orange Cove North (3611963)

Sources:

MUN06F0001 MUNSON, S. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR AMBYSTOMA CALIFORNIENSE 2006-04-14

WIL06R0001 WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2006 ANNUAL REPORT 2006-08-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 43330
EO Index: 43330
Key Quad: Remnoy (3611935)
Element Code: ABNKC19070
Occurrence Number: 828
Occurrence Last Updated: 2000-07-28

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2000-07-10
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2000-07-10
Occurrence Rank: Poor
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTH SIDE OF HOUSTON AVENUE AT THE INTERSECTION OF CROSS CREEK, 1.2 MILES EAST OF 6TH AVENUE, 4 MILES SE OF HAMBLIN.

Detailed Location:

Ecological:

NEST TREE IS SUSPECTED TO BE AN OAK.

Threats:

General:

THE PAIR (INCLUDING 1 LIGHT-PHASE ADULT) WAS OBSERVED AT THIS SITE IN MAY-JUN 2000. ON 17 JUL 2000, 2 FLEDGLINGS WERE OBSERVED ON THE WIRE ABOVE THE CREEK.

PLSS: T19S, R22E, Sec. 12 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4019951 E271441
Latitude/Longitude: 36.29749 / -119.54528
Elevation (feet): 245

County Summary:

Kings

Quad Summary:

Remnoy (3611935)

Sources:

BRO00F0011 BROWN, N. - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2000-07-17

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	69651	**EO Index:**	70431
Key Quad:	Goshen (3611934)	**Element Code:**	ABNKC19070
Occurrence Number:	1691	**Occurrence Last Updated:**	2013-09-11

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2012-08-07	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2012-08-07	**Occurrence Rank:**	Good
Owner/Manager:	CALTRANS	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

S SIDE OF HWY 198, 0.3 MI E OF RD 52, 2.4 MI SW OF GOSHEN.

Detailed Location:

NEST TREE WAS LOCATED WITHIN THE CALTRANS RIGHT-OF-WAY FOR STATE ROUTE 198. MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST TREE WAS A BLACK WALNUT; SURROUNDED BY AGRICULTURAL FIELDS PLANTED WITH ALFALFA, BARLEY, AND WALNUT TREES. 2012 SURVEYOR NOTED DISTURBANCE FROM FARMING ACTIVITIES AND DANGER OF TRAFFIC.

Threats:

POTENTIAL FOR VEHICLE COLLISIONS.

General:

2 JUVENILES ON/NEAR NEST TREE, 2 ADULTS SOARING OVERHEAD OBSERVED 13 JUL 2007. 2 ADULTS OBS IN NEST TREE 18 MAR, 2 CHICKS IN NEST 11 JUN, 2 FLEDGLINGS NEAR NEST TREE 15 JUL 2008. INCUBATION OBS 30 APR, 1 BEGGING JUV AT NEST SITE 7 AUG 2012.

PLSS:	T18S, R23E, Sec. 35, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4023038 E279914	**Latitude/Longitude:**	36.32726 / -119.45187	**Elevation (feet):**	260

County Summary:	**Quad Summary:**
Tulare	Goshen (3611934)

Sources:

DAN12F0034	DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-30
NUN07F0001	NUNES, T. & R. KLEINFELTER (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI (NEST SITE) 2007-07-13
NUN08F0003	NUNES, T. & H. BAKER (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-03-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	86224	**EO Index:**	87266
Key Quad:	Traver (3611944)	**Element Code:**	ABNKC19070
Occurrence Number:	1782	**Occurrence Last Updated:**	2012-06-28

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

CNDDB Element Ranks: **Global:** G5

State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2011-04-22	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-04-22	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SOUTH SIDE OF SAINT JOHNS RIVER ABOUT 1 MILE DOWNSTREAM (WEST) OF ROAD 80 (ALTA AVE), ABOUT 4.9 MILES SE OF TRAVER.

Detailed Location:

MAPPED TO PROVIDED COORDINATES AND ISOLATED TREE VISIBLE IN AERIAL.

Ecological:

SURROUNDING LAND IS PRIMARILY AGRICULTURE FIELDS.

Threats:

General:

1 ADULT OBSERVED IN ADJACENT SEC 25 NEAR THE CONFLUENCE OF CROSS CREEK & ST. JOHNS RIVER IN 2008, BUT NESTING NOT DETERMINED. 2 ADULTS OBSERVED AT A NEST HERE ON 22 APR 2011.

PLSS:	T17S, R24E, Sec. 31, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4032672 E283495	**Latitude/Longitude:**	36.41485 / -119.41469	**Elevation (feet):**	285

County Summary:	**Quad Summary:**
Tulare	Traver (3611944)

Sources:

HAL08F0002	HALSTEAD, P. & J. HALSTEAD (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-07-16
HAL11F0003	HALSTEAD, J. ET AL. (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2011-04-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 86225
EO Index: 87267
Key Quad: Traver (3611944)
Element Code: ABNKC19070
Occurrence Number: 1783
Occurrence Last Updated: 2012-06-28

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2008-07-16
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-07-16
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

JUST SOUTH OF COTTONWOOD CREEK, ABOUT 0.5 MILE UPSTREAM (EAST) OF ROAD 80 (ALTA AVE), ABOUT 5.9 MILES ESE OF TRAVER.

Detailed Location:

MAPPED WITH RESPECT TO PROVIDED MAPS AND ISOLATED TREE VISIBLE IN AERIALS.

Ecological:

NON-NATIVE GRASSLAND ALONG COTTONWOOD CREEK WITH MOST SURROUNDING LANDS USED FOR AGRICULTURE. NO OTHER TREES FOR NESTING WITHIN A 1/2 MILE.

Threats:

General:

A PAIR OF SWAINSON'S HAWKS WAS OBSERVED IN A WILLOW TREE ON 16 JUL 2008.

PLSS: T17S, R24E, Sec. 21, SW (M)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-11 N4034838 E286289
Latitude/Longitude: 36.43498 / -119.38415
Elevation (feet): 290

County Summary:

Tulare

Quad Summary:

Traver (3611944)

Sources:

HAL08F0002 HALSTEAD, P. & J. HALSTEAD (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-07-16

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	86226	**EO Index:**	87268
Key Quad:	Traver (3611944)	**Element Code:**	ABNKC19070
Occurrence Number:	1784	**Occurrence Last Updated:**	2013-09-12

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

CNDDB Element Ranks: **Global:** G5

State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2012-08-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2012-08-XX	**Occurrence Rank:**	Fair
Owner/Manager:	CALTRANS ROW	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

MEDIAN OF HWY 99 AT CROSS CREEK, ABOUT 3.8 MILES SSE OF TRAVER.

Detailed Location:

2008 DETECTION MAPPED TO MIDDLE POLYGON, PER PROVIDED AERIAL MAP. 2012 DETECTIONS MAPPED TO NORTH AND SOUTH POLYGONS, PER PROVIDED COORDINATES.

Ecological:

ADULT "SITTING IN CROW NEST" MAR 2008; MAY HAVE BEEN REPAIRING NEST OR REUSING NEST MATERIAL FOR NEW NEST NEARBY. 2012 NESTS IN EUCALYPTI MEDIAN JUST N AND S OF CREEK. NON-NATIVE GRASSLAND ALONG CREEK USED FOR GRAZING, THEN AGRICULTURE.

Threats:

POTENTIAL FOR COLLISION WITH FAST-MOVING VEHICLES ON EIHER SIDE OF NEST.

General:

UNCONFIRMED NEST SITE IN 2008. PAIR & 1 CHICK OBSERVED AT N NEST IN 2012; CHICK SUCCESSFULLY FLEDGED IN AUG. PAIR AT S NEST PRODUCED 2 YOUNG IN 2012; 1ST DIED WITHIN 2 WEEKS OF HATCHING, 2ND HIT BY VEHICLE WHILE BRANCHING/FLEDGING.

PLSS:	T17S, R23E, Sec. 34, SE (M)	**Accuracy:**	nonspecific area	**Area (acres):**	27
UTM:	Zone-11 N4032110 E279465	**Latitude/Longitude:**	36.40887 / -119.45945	**Elevation (feet):**	275

County Summary:	**Quad Summary:**
Tulare	Traver (3611944)

Sources:

HAL08F0003	HALSTEAD, J. ET AL. (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-03-XX
WAL12F0005	WALBRIDGE, C. (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-05-15
WAL12F0006	WALBRIDGE, C. (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-05-15

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	86229	**EO Index:**	87271
Key Quad:	Goshen (3611934)	**Element Code:**	ABNKC19070
Occurrence Number:	1786	**Occurrence Last Updated:**	2013-08-30

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	1993-XX-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1999-04-20	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NW OF ROAD 48 AT HWY 198 (E LACEY BLVD), ABOUT 9.4 MILES W OF VISALIA CITY HALL.

Detailed Location:

TERRITORY TU002 FROM CDFW DATABASE. MAPPED TO LIKELY HABITAT IN AERIALS PER GIVEN LOCS "SE1/4 S27 T18S R23E; JUST W OF ROAD 48 ON THE N SIDE OF STATE HWY 198" ('91-92) & "SE1/4 SW1/4 S27 T18S R23E; 0.4 MI E COUNTYLINE, NORTH 198" (1992-94).

Ecological:

NEST 60-70 FEET HIGH IN EUCALYPTUS TREE (1991 & 1992). DFG SWHA TERRITORY #TU002 IN LARGE EUCALYPTUS (1992-1994). SURROUNDING LAND USED FOR AGRICULTURE.

Threats:

General:

1 PAIR MATING IN PECAN TREE ON S EDGE OF HWY 198 ON 20 APR 1991, & 1 ADULT ON NEST 19 MAY 1991. 1 BROODING ADULT ON THE NEST WITH ITS MATE PERCHED NEARBY ON 20 JUN 1992. NESTING IN 1992-93. NEST OCCUPIED BY RED-TAILED HAWKS IN 1994 & 1999.

PLSS:	T18S, R23E, Sec. 27, SW (M)	**Accuracy:**	1/5 mile	**Area (acres):**	0
UTM:	Zone-11 N4023389 E278501	**Latitude/Longitude:**	36.33010 / -119.46770	**Elevation (feet):**	270

County Summary:	**Quad Summary:**
Tulare	Goshen (3611934)

Sources:

BRO99U0004	BROWN, N. - 1999 SWAINSON'S HAWK SURVEY SUMMARY AND TABLE. 1999-11-09
DFG94U0003	DFG - NONGAME BIRDS & MAMMALS - TABLE OF SWAINSON'S HAWK NEST RECORDS THROUGH 1994. 1994-XX-XX
HAN92R0001	HANSEN, R. B. - BIOLOGICAL ASSESSMENT OF NATURAL HABITAT AREAS & SENSITIVE SPECIES STATUS ON THE SITE OF A PROPOSED REGIONAL FLYING SITE... (HARRELL RANCH) IN TULARE COUNTY, CA. 1992-07-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 86995
EO Index: 87964
Key Quad: Remnoy (3611935)
Element Code: ABNKC19070
Occurrence Number: 1788
Occurrence Last Updated: 2012-10-22

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G5
State: S3
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2008-07-15
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-07-15
Occurrence Rank: Fair
Owner/Manager: CALTRANS
Trend: Unknown
Presence: Presumed Extant

Location:

S SIDE OF HWY 198, 0.6 MI W OF 2ND AVE, ABOUT 3 MI ESE OF REMNOY.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST TREE WAS A LONE EUCALYPTUS TREE (40" DBH). SURROUNDING LAND USE FOR DAIRY, SILAGE FIELDS, AND RURAL RESIDENTIAL. AN OLD LOPSIDED NEST WAS ON THE N SIDE OF THE NEST TREE (2008).

Threats:

General:

NEST BUILDING OBSERVED 18 MAR; 1 ADULT PERCHED & ANOTHER COLLECTING NESTING MATERIAL AND ADDING TO NEST 17 APR; 1 CHICK OBSERVED IN NEST 26 JUN; 1 FLEDGLING OBSERVED ON THE NEST 15 JUL 2008.

PLSS: T18S, R23E, Sec. 32, NW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4023246 E275246
Latitude/Longitude: 36.32806 / -119.50390
Elevation (feet): 260

County Summary:	Quad Summary:
Kings	Remnoy (3611935)

Sources:

CON08F0002	CONNOLLY, L. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-04-17
NUN08F0004	NUNES, T. & R. KLEINFELTER (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-04-16

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 86999
EO Index: 87966
Key Quad: Goshen (3611934)
Element Code: ABNKC19070
Occurrence Number: 1790
Occurrence Last Updated: 2012-10-22

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2008-07-15
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-07-15
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

E SIDE OF 1 1/2 AVE, ABOUT 0.25 MI N OF HWY 198 (E LACEY BLVD), 3.8 MI WSW OF GOSHEN.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST TREE WAS A VALLEY OAK (33" DBH) WITHIN A DIRT PULLOUT WHERE FARM EQUIPMENT WAS OFTEN STORED. SURROUNDING LAND USE INCLUDED CORN FIELDS AND ORCHARDS.

Threats:

General:

NEST BUILDING OBSERVED 27 MAR; 2 CHICKS IN NEST 11 JUN; 2 FLEDGLINGS NEAR NEST 15 JUL 2008.

PLSS: T18S, R23E, Sec. 28, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4023600 E277052
Latitude/Longitude: 36.33166 / -119.48389
Elevation (feet): 250

County Summary:	Quad Summary:
Kings	Goshen (3611934)

Sources:

NUN08F0005 NUNES, T. & K. GOSHGARIAN - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2008-03-27

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 87000
Key Quad: Remnoy (3611935)
Occurrence Number: 1791
EO Index: 87967
Element Code: ABNKC19070
Occurrence Last Updated: 2012-10-22

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
CNDDB Element Ranks: **Global:** G5
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2009-07-16
Last Survey Date: 2009-07-16
Owner/Manager: CALTRANS
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:

S SIDE OF HWY 198 (LACEY BLVD) JUST W OF CROSS CREEK, ABOUT 1.4 MI ESE OF REMNOY.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST TREE WAS A EUCALYPTUS SURROUNDED BY DAIRY FACILITIES AND CORN FIELDS.

Threats:

General:

1 ADULT AND 1 JUVENILE OBSERVED IN THE NEST TREE 16 JUL 2009.

PLSS: T18S, R22E, Sec. 36, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4023325 E272593
Latitude/Longitude: 36.32814 / -119.53344
Elevation (feet): 250

County Summary:	Quad Summary:
Kings	Remnoy (3611935)

Sources:

NUN09F0011 NUNES, T. (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2009-07-16

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 87002
EO Index: 87968
Key Quad: Remnoy (3611935)
Element Code: ABNKC19070
Occurrence Number: 1792
Occurrence Last Updated: 2012-10-22

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2009-06-29
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2009-06-29
Occurrence Rank: Good
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

ABOUT 0.6 MI SSE OF HWY 198 (LACEY BLVD) AT 6TH AVE, 1.5 MI SSW OF REMNOY, AND 5.3 MI E OF FORT ROOSEVELT.

Detailed Location:

USING AIR PHOTOS, MAPPED TO LOCATION DESCRIPTION: "APPROXIMATELY 0.5 MI S OF STATE ROUTE 198 ON 6TH AVENUE...ROW OF COTTOWNWOODS LOCATED BETWEEN THE 2Y'S RANCH AND THE LAKESIDE DITCH."

Ecological:

NEST WAS WITHIN A COTTONWOOD JUST N OF A TURKEY RANCH SURROUNDED BY CORN AND PISTACHIO FIELDS.

Threats:

General:

MATING ADULTS OBSERVED 25 MAR; NEST BUILDING 1 APR; 2 CHICKS IN NEST 27 MAY; 2 FLEDGLINGS IN AND ADJACENT TO NEST TREE 29 JUN 2009.

PLSS: T18S, R22E, Sec. 35, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4022434 E269968
Latitude/Longitude: 36.31950 / -119.56240
Elevation (feet): 250

County Summary:	Quad Summary:
Kings	Remnoy (3611935)

Sources:

NUN09F0010 NUNES, T. & K. GOSHGARIAN (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2009-03-25

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 87003
EO Index: 87969
Key Quad: Goshen (3611934)
Element Code: ABNKC19070
Occurrence Number: 1793
Occurrence Last Updated: 2012-10-22

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G5
State: S3
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2012-07-12
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-07-12
Occurrence Rank: Fair
Owner/Manager: CALTRANS
Trend: Unknown
Presence: Presumed Extant

Location:

S SIDE OF HWY 198 (LACEY BLVD), ABOUT 0.3 MI E OF RD 56, 2 MI SW OF GOSHEN.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST WAS WITHIN A CALIFORNIA BLACK WALNUT ALONG HWY 198 AND SURROUNDED BY AGRICULTURAL OPERATIONS.

Threats:

General:

1 DOWNY CHICK WAS OBSERVED IN NEST AND 1 ADULT WAS PERCHED IN ADJACENT TREE.

PLSS: T18S, R23E, Sec. 35, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4023014 E280680
Latitude/Longitude: 36.32722 / -119.44334
Elevation (feet): 280

County Summary:	Quad Summary:
Tulare	Goshen (3611934)

Sources:

NUN12F0006 NUNES, T. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-07-12

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 90264
Key Quad: Selma (3611955)
Occurrence Number: 2506
EO Index: 91297
Element Code: ABNKC19070
Occurrence Last Updated: 2013-10-02

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
CNDDB Element Ranks: **Global:** G5
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 1926-04-04
Last Survey Date: 1926-04-04
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

KINGSBURG.

Detailed Location:

MAPPED TO GIVEN LOCALITY "KINGSBURG." EXACT COLLECTION LOCATION UNKNOWN.

Ecological:

Threats:

DEVELOPMENT SINCE THE TIME OF COLLECTION HAS ELIMINATED NESTING AND FORAGING HABITAT.

General:

EGGS COLLECTED BY D. BULL ON 4 APR 1926.

PLSS: T16S, R22E, Sec. 22 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4044550 E270874
Latitude/Longitude: 36.51889 / -119.55884
Elevation (feet): 290

County Summary:

Fresno

Quad Summary:

Selma (3611955)

Sources:

BUL26S0001 BULL, D. - WFVZ EGG-NEST SPECIMEN #14937, COLLECTED AT KINGSBURG. 1926-04-04

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 90287
EO Index: 91320
Key Quad: Traver (3611944)
Element Code: ABNKC19070
Occurrence Number: 2510
Occurrence Last Updated: 2013-09-12

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2012-08-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-08-XX
Occurrence Rank: Fair
Owner/Manager: CALTRANS
Trend: Unknown
Presence: Presumed Extant

Location:

STATE ROUTE 99 MEDIAN, ABOUT 1.5 MILES NW OF THE CROSS CREEK CROSSING AND 2.3 MILES SE OF THE TRAVER POST OFFICE.

Detailed Location:

MAPPED TO GIVEN COORDINATES.

Ecological:

NEST IN TRIMMED EUCALYPTUS IN MEDIAN, FOUND DURING ROAD CONSTRUCTION. SURROUNDING LAND USE WAS AGRICULTURAL, INCLUDING DAIRY IMMEDIATELY TO WEST.

Threats:

POTENTIAL FOR COLLISION WITH FAST-MOVING VEHICLES ON EITHER SIDE OF NEST.

General:

NESTING PAIR WITH 1 CHICK OBSERVED IN 2012; CHICK SUCCESSFULLY FLEDGED IN AUGUST.

PLSS: T17S, R23E, Sec. 27, NW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4033778 E278635
Latitude/Longitude: 36.42370 / -119.46917
Elevation (feet): 270

County Summary:

Tulare

Quad Summary:

Traver (3611944)

Sources:

WAL12F0004 WALBRIDGE, C. (CALIFORNIA DEPARTMENT OF TRANSPORTATION) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-05-15

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 90293
EO Index: 91328
Key Quad: Goshen (3611934)
Element Code: ABNKC19070
Occurrence Number: 2511
Occurrence Last Updated: 2013-09-12

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2012-04-16
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-04-16
Occurrence Rank: Excellent
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF COUNTY ROAD 60, ABOUT 0.25 MILE SSW OF ITS JUNCTION WITH AVE 290 AND 2.9 MILES SW OF GOSHEN.

Detailed Location:

MAPPED TO GIVEN COORDINATES, ABOUT 275 FEET WEST OF ROAD 60.

Ecological:

NEST 20' UP IN A WALNUT TREE WITHIN A WALNUT ORCHARD. SURROUNDING AREA PLANTED IN ORCHARDS AND CROPS, PRIMARILY ALFALFA AND CORN, WITH CATTLE YARD TO NORTH. 2012 SURVEYOR NOTED DISTURBANCE FROM FARMING ACTIVITIES.

Threats:

General:

PAIR OBSERVED NEST-BUILDING ON 16 APR 2012; AT LEAST 2 YOUNG WERE FLEDGED BY LATER, UNSPECIFIED DATE.

PLSS: T19S, R23E, Sec. 02, NE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4021367 E280902
Latitude/Longitude: 36.31243 / -119.44040
Elevation (feet): 275

County Summary:

Tulare

Quad Summary:

Goshen (3611934)

Sources:

DAN12F0029 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	90294	**EO Index:**	91329
Key Quad:	Goshen (3611934)	**Element Code:**	ABNKC19070
Occurrence Number:	2512	**Occurrence Last Updated:**	2013-10-03

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2012-05-31	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2012-08-XX	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF COUNTY ROAD 68 (=J25) ABOUT 0.7 MILE N OF THE AVENUE 280 INTERSECTION AND 3 MILES SOUTH OF GOSHEN.

Detailed Location:

MAPPED TO GIVEN COORDINATES. NEST TREE ABOUT 100 FEET WEST OF ROAD 68, OPPOSITE THE "VISALIA WATER CONSERVATION PLANT."

Ecological:

NEST 30' UP IN ISOLATED VALLEY OAK IN ALFALFA FIELD SURROUNDED BY MIX OF WALNUT ORCHARDS AND ROW CROPS DOMINATED BY ALFALFA. 2012 SURVEYOR NOTED DISTURBANCE FROM FARM ACTIVITIES.

Threats:

General:

PAIR OBSERVED NEST-BUILDING ON 5 APR 2012; FEEDING UNKNOWN NUMBER OF CHICKS ON 31 MAY; BRANCH HOLDING NEST BROKE (POSSIBLY DURING STORM ON 4-5 JUN), NEST FAILED; TERRITORY UNOCCUPIED IN EARLY AUG.

PLSS:	T19S, R23E, Sec. 01, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4020771 E282552	**Latitude/Longitude:**	36.30744 / -119.42187	**Elevation (feet):**	280

County Summary:	**Quad Summary:**
Tulare	Goshen (3611934)

Sources:

DAN12F0027 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	90295	**EO Index:**	91330
Key Quad:	Goshen (3611934)	**Element Code:**	ABNKC19070
Occurrence Number:	2513	**Occurrence Last Updated:**	2013-10-03

Scientific Name: *Buteo swainsoni*

Common Name: Swainson's hawk

Listing Status: **Federal:** None

State: Threatened

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2012-08-07	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2012-08-07	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF COUNTY ROAD 68 (=J25), ABOUT 0.1 MILE NNE OF THE AVENUE 280 INTERSECTION AND 3.5 MILES SOUTH OF GOSHEN.

Detailed Location:

MAPPED TO GIVEN COORDINATES. NEST TREE ABOUT 250 FEET EAST OF ROAD 68, NORTH OF A SMALL ABANDONED SCHOOL HOUSE (PACKWOOD SCHOOL).

Ecological:

NEST 20' UP IN WALNUT TREE IN WALNUT ORCHARD. SURROUNDING AREA PLANTED IN ROW CROPS DOMINATED BY ALFALFA AND CORN. SURVEYOR NOTED DISTURBANCE FROM FARMING ACTIVITIES.

Threats:

General:

PAIR OBSERVED NEST-BUILDING ON 17 APR 2012; 2 CHICKS IN NEST ON 19 JUN; 1 JUVENILE OBSERVED AT NEST SITE ON 7 AUG, INDICATING THAT AT LEAST 1 YOUNG SUCCESSFULLY FLEDGED.

PLSS:	T19S, R24E, Sec. 06, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4019890 E282662	**Latitude/Longitude:**	36.29953 / -119.42041	**Elevation (feet):**	280

County Summary:	**Quad Summary:**
Tulare	Goshen (3611934)

Sources:

DAN12F0031 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-17

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 90296
EO Index: 91334
Key Quad: Goshen (3611934)
Element Code: ABNKC19070
Occurrence Number: 2514
Occurrence Last Updated: 2013-09-12

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2012-04-06
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-04-06
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF ROAD 76 (=ELKHORN ST), ABOUT 0.1 MILE NORTH OF THE AVENUE 272 INTERSECTION AND 4.5 MILES SSE OF GOSHEN.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST 60' UP IN 1 OF 3 CYPRESSES IN YARD OF PRIVATE RESIDENCE. SURROUNDING LAND USES WERE MAINLY WALNUT ORCHARDS AND ROW CROPS DOMINATED BY CORN, WITH A FEW OTHER RESIDENCES ON THE STREET.

Threats:

General:

PAIR OBSERVED NEST-BUILDING ON 6 APR 2012; THE NEST WAS SUCCESSFUL AND AT LEAST ONE YOUNG WAS FLEDGED ON UNSPECIFIED DATE.

PLSS: T19S, R24E, Sec. 07, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4018251 E284148
Latitude/Longitude: 36.28510 / -119.40341
Elevation (feet): 280

County Summary:	Quad Summary:
Tulare	Goshen (3611934)

Sources:

DAN12F0028 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 90297
EO Index: 91335
Key Quad: Goshen (3611934)
Element Code: ABNKC19070
Occurrence Number: 2515
Occurrence Last Updated: 2013-09-12

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2012-06-19
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-08-07
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTH SIDE OF AVE 280 (=HOUSTON/W CALDWELL AVE) ALMOST 0.5 MILE EAST OF RD 44 (1ST AVE) AND 4.5 MILES SW OF GOSHEN.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. NEST TREE LOCATED OPPOSITE DIKED HOLDING PONDS ON THE NORTH SIDE OF THE ROAD.

Ecological:

NEST 50' UP IN PINE AMONG ROW OF PINES AT A PRIVATE RESIDENCE. SURROUNDING LAND USES WERE CATTLE YARDS AND ROW CROPS, WITH ALFALFA FIELDS NEARBY. SURVEYOR NOTED DISTURBANCE FROM FARMING ACTIVITIES AND TRAFFIC.

Threats:

General:

PAIR OBSERVED NEST-BUILDING ON 16 APR 2012; ADULT SEEN ON NEST ON 1 & 19 JUN; NEST INTACT BUT NO SWAINSON'S HAWKS PRESENT ON SUCCESSIVE VISITS 5, 6, & 7 AUG, NEST SUCCESS UNCERTAIN.

PLSS: T19S, R23E, Sec. 10, N (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4019786 E278561
Latitude/Longitude: 36.29766 / -119.46601
Elevation (feet): 260

County Summary:	Quad Summary:
Tulare	Goshen (3611934)

Sources:

DAN12F0030 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-16

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	90303	**EO Index:**	91345
Key Quad:	Remnoy (3611935)	**Element Code:**	ABNKC19070
Occurrence Number:	2517	**Occurrence Last Updated:**	2016-12-07

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2016-06-08	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-06-08	**Occurrence Rank:**	Good
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SOUTH SIDE OF E LACEY BLVD, ABOUT 0.25 MILE NE OF THE HWY 43 (=8TH AVE) OVERPASS OVER HWY 198, EAST OF HANFORD.

Detailed Location:

MAPPED TO COORDINATES GIVEN ON FIELD SURVEY FORMS.

Ecological:

2012: NEST 50' UP IN ROADSIDE EUCALYPTUS, WITH CONSTRUCTION & STORAGE YARD IMMEDIATELY SOUTH AND ROW CROPS NORTH OF LACEY BLVD (CORN IN 2012). 2016: EUCALYPTUS ON SOUTH SIDE OF ROAD, APPEARS TO BE SAME LOCATION AS 2012.

Threats:

VEHICLE COLLISIONS FROM TRAFFIC ALONG ROADWAY (2012, 2016). AGRICULTURE (2016).

General:

INCUBATION OBSERVED ON 17 APR 2012; 1 CHICK SEEN IN THE NEST ON 31 MAY; ADULT FEMALE FOUND DEAD ON ROAD OPPOSITE THE NEST ON 11 JUN (LIKELY TRAFFIC COLLISION), CHICK IN NEST WAS DEAD. 1 ADULT OBSERVED SITTING ON NEST ON 8 JUN 2016.

PLSS:	T18S, R22E, Sec. 33, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4023451 E266798	**Latitude/Longitude:**	36.32790 / -119.59799	**Elevation (feet):**	248

County Summary:	**Quad Summary:**
Kings	Remnoy (3611935)

Sources:

CHE16F0007 CHEN, S. ET AL. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2016-06-08

DAN12F0032 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-04-17

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	90305	**EO Index:**	91347
Key Quad:	Remnoy (3611935)	**Element Code:**	ABNKC19070
Occurrence Number:	2518	**Occurrence Last Updated:**	2013-10-04

Scientific Name: *Buteo swainsoni* **Common Name:** Swainson's hawk

Listing Status: **Federal:** None **Rare Plant Rank:**

State: Threatened **Other Lists:** BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

CNDDB Element Ranks: **Global:** G5

State: S3

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed:	2012-08-08	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2012-08-08	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

NORTH SIDE OF GRANGEVILLE BLVD, FROM 7TH AVE INTERSECTION TO ABOUT 0.3 MILE EAST, 2.6 MILES EAST OF HANFORD.

Detailed Location:

2 NEST SITES, MAPPED TO GIVEN COORDINATES. WEST SITE, 200' EAST OF 7TH AVE, WAS FIRST NEST ATTEMPT; EAST SITE, ABOUT 1700' EAST OF 7TH AVE, WAS SECOND, SUCCESSFUL ATTEMPT.

Ecological:

FIRST NEST IN SMALL, RELATIVELY YOUNG WALNUT ORCHARD. SECOND NEST 50' UP IN EUCALYPTUS ON BACKSIDE OF PRIVATE RESIDENCE. SURROUNDED BY ORCHARDS AND ROW CROPS OF CORN AND ALFALFA. DISTURBANCE FROM FARMING ACTIVITIES AND TRAFFIC.

Threats:

POTENTIAL FOR VEHICLE COLLISIONS ALONG BUSY LOCAL ROAD.

General:

NEST-BUILDING OBSERVED AT 1ST NEST SITE ON 1 MAR 2012; 1ST NEST STILL ACTIVE IN EARLY APR, LATER ABANDONED. THREE YOUNG FLEDGED FROM 2ND NEST, FAMILY GROUP OF 2 ADULTS AND 3 JUVENILES OBSERVED FORAGING ABOUT 0.25 MI E OF NEST ON 8 AUG 2012.

PLSS:	T18S, R22E, Sec. 22, SW (M)	**Accuracy:**	specific area	**Area (acres):**	10
UTM:	Zone-11 N4025161 E268733	**Latitude/Longitude:**	36.34376 / -119.57695	**Elevation (feet):**	255

County Summary:	**Quad Summary:**
Kings	Remnoy (3611935)

Sources:

DAN12F0033 DANIELS, B. (BONTERRA CONSULTING) - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2012-05-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A2899
Key Quad: Remnoy (3611935)
Occurrence Number: 2703
EO Index: 104518
Element Code: ABNKC19070
Occurrence Last Updated: 2016-12-07

Scientific Name: *Buteo swainsoni*
Common Name: Swainson's hawk

Listing Status: **Federal:** None
State: Threatened
CNDDB Element Ranks: **Global:** G5
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

BREEDS IN GRASSLANDS WITH SCATTERED TREES, JUNIPER-SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCH LANDS WITH GROVES OR LINES OF TREES.

Micro Habitat:

REQUIRES ADJACENT SUITABLE FORAGING AREAS SUCH AS GRASSLANDS, OR ALFALFA OR GRAIN FIELDS SUPPORTING RODENT POPULATIONS.

Last Date Observed: 2016-06-06
Last Survey Date: 2016-06-06
Owner/Manager: PVT
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:

WEST SIDE OF 7TH AVE ABOUT 0.4 MI N OF THE IONA AVE INTERSECTION & 1.1 MI SE OF HWY 43 AT HOUSTON AVE, SE OF HANFORD.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

NEST IN ASH TREE ADJACENT TO ALFALFA FIELDS.

Threats:

AGRICULTURE.

General:

1 ADULT OBSERVED DELIVERING FOOD TO UNSEEN NEST IN TREE ON 6 JUN 2016; A SECOND INDIVIDUAL NEARBY WAS LIKELY ITS MATE.

PLSS: T19S, R22E, Sec. 9, SE (M)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-11 N4019230 E267964
Latitude/Longitude: 36.29016 / -119.58376
Elevation (feet): 243

County Summary:

Kings

Quad Summary:

Remnoy (3611935)

Sources:

CHE16F0010 CHEN, S. ET AL. - FIELD SURVEY FORM FOR BUTEO SWAINSONI 2016-06-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 95841
Key Quad: Selma (3611955)
Occurrence Number: 198
EO Index: 96985
Element Code: ABNRB02022
Occurrence Last Updated: 2015-04-13

Scientific Name: *Coccyzus americanus occidentalis*
Common Name: western yellow-billed cuckoo

Listing Status: **Federal:** Threatened
State: Endangered

CNDDB Element Ranks: **Global:** G5T2T3
State: S1

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
NABCI_RWL-Red Watch List
USFS_S-Sensitive
USFWS_BCC-Birds of Conservation Concern

General Habitat:

RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.

Micro Habitat:

NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, WITH LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.

Last Date Observed: 1898-07-08
Last Survey Date: 1898-07-08
Owner/Manager: UNKNOWN
Presence: Possibly Extirpated

Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:

SELMA.

Detailed Location:

Ecological:

Threats:

SUITABLE HABITAT HAS BEEN REPLACED BY AGRICULTURE AND DEVELOPMENT SINCE THE TIME OF COLLECTION.

General:

2 EGGS COLLECTED ON 8 JUL 1898 (USNM #B 44012).

PLSS: T16S, R22E, Sec. 06 (M)
UTM: Zone-11 N4050498 E266256

Accuracy: 1 mile
Latitude/Longitude: 36.57134 / -119.61218

Area (acres): 0
Elevation (feet): 300

County Summary:

Fresno

Quad Summary:

Selma (3611955), Conejo (3611956)

Sources:

MIL98S0001 MILLIGAN, F. - MILLIGAN SN USNM #44012, COLLECTED FROM SELMA 1898-07-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 24419
Key Quad: Visalia (3611933)
Occurrence Number: 210
EO Index: 97213
Element Code: ABNRB02022
Occurrence Last Updated: 2015-05-08

Scientific Name: *Coccyzus americanus occidentalis*
Common Name: western yellow-billed cuckoo

Listing Status: **Federal:** Threatened
State: Endangered

CNDDB Element Ranks: **Global:** G5T2T3
State: S1

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
NABCI_RWL-Red Watch List
USFS_S-Sensitive
USFWS_BCC-Birds of Conservation Concern

General Habitat:

RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.

Micro Habitat:

NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, WITH LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.

Last Date Observed: 1919-07-01
Last Survey Date: 1919-07-01
Owner/Manager: UNKNOWN
Presence: Extirpated

Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:

VISALIA.

Detailed Location:

EXACT COLLECTION LOCATION UNKNOWN. MAPPED GENERALLY TO GIVEN LOCALITY.

Ecological:

Threats:

THIS IS A HISTORICAL OCCURRENCE, AGRICULTURE AND DEVELOPMENT HAVE ELIMINATED HABITAT IN THIS AREA.

General:

A NEST WITH THREE EGGS WAS PHOTOGRAPHED IN THIS VICINITY IN JULY 1919.

PLSS: T18S, R25E, Sec. 29 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4023417 E293889
Latitude/Longitude: 36.33377 / -119.29640
Elevation (feet): 330

County Summary:	Quad Summary:
Tulare	Visalia (3611933)

Sources:

DIC19I0001 DICKEY, D. - IMAGE ID #F1006 FROM UCLA DONALD RYDER DICKEY PHOTOGRAPHIC COLLECTION, "NEST AND THREE EGGS - VISALIA, TULARE COUNTY, CALIFORNIA." 1919-07-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 55307
EO Index: 55307
Key Quad: Traver (3611944)
Element Code: AMAJA03041
Occurrence Number: 150
Occurrence Last Updated: 2004-05-03

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
State: Threatened
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:

ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:

NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 2003-08-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2003-08-08
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

NORTHEAST OF GOSHEN, 600 FT SW OF THE INTERSECTION OF J19 (AKA ROAD 80) & J34 (AKA AVE 328).

Detailed Location:

UTM COORDINATES AND MAP DO NOT INDICATE THE SAME LOCATION. USED THE MAP TO PLOT THE SIGHTING. ALSO LOCATION CONFIRMED BY E-MAIL.

Ecological:

IRRIGATED ALFALFA, BURROWING OWLS WERE IN THE AREA.

Threats:

DOGS & COYOTES.

General:

2003: 08/08/2003 ONE ADULT SIGHTED FORAGING IN FRESHLY CUT ALFALFA FIELD AT 22:30, ABOUT 600 FEET SW OF THE INTERSECTION.

PLSS: T18S, R24E, Sec. 08, SE (M)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-11 N4029131 E285037
Latitude/Longitude: 36.38330 / -119.39653
Elevation (feet): 300

County Summary:	Quad Summary:
Tulare	Traver (3611944)

Sources:

VIS03F0001	VISGER, G. (VISGER AND ASSOCIATES, INC.) - FIELD SURVEY FORM FOR VULPES MACROTIS MUTICA 2003-08-08
VIS04U0001	VISGER, G. (VISGER AND ASSOCIATES, INC.) - E-MAIL TO C. REINER REGARDING VULPES MACROTIS MUTICA 2004-04-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67377
EO Index: 67545
Key Quad: Monson (3611943)
Element Code: AMAJA03041
Occurrence Number: 618
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1972-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1972-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 2.5 MI SE OF MONSON, W OF DINUBA BLVD.

Detailed Location:

Ecological:

Threats:

General:
KIT FOX OBSERVATION(S) IN 1972. SIGHTING AT DEN SOMETIME FROM 1972 THROUGH JUL 1975.

PLSS: T17S, R25E, Sec. 07 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4038303 E293682
Latitude/Longitude: 36.46782 / -119.30265
Elevation (feet): 320

County Summary:
Tulare

Quad Summary:
Monson (3611943)

Sources:

MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

SWI73R0001 SWICK, C.D. - DETERMINATION OF SAN JOAQUIN KIT FOX RANGE IN CCA, SJQ, ALA & TUL COUNTIES, CDFG 1973-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67378
EO Index: 67546
Key Quad: Traver (3611944)
Element Code: AMAJA03041
Occurrence Number: 619
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1971-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1971-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 4.7 MI NNE OF GOSHEN, JUST N OF ST. JOHNS RIVER.

Detailed Location:

Ecological:

Threats:

General:
KIT FOX OBSERVATION(S) IN 1971. SIGHTING, ROAD KILL OR DEN PRIOR TO 1972.

PLSS: T17S, R24E, Sec. 29 (M)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-11 N4032754 E285070
Latitude/Longitude: 36.41594 / -119.39717
Elevation (feet): 290

County Summary:
Tulare

Quad Summary:
Traver (3611944)

Sources:

MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

SWI73R0001 SWICK, C.D. - DETERMINATION OF SAN JOAQUIN KIT FOX RANGE IN CCA, SJQ, ALA & TUL COUNTIES, CDFG 1973-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67379
EO Index: 67547
Key Quad: Goshen (3611934)
Element Code: AMAJA03041
Occurrence Number: 620
Occurrence Last Updated: 2006-12-13

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1973-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1973-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
INTERSECTION OF HWY 198 AND TULARE/KINGS COUNTY LINE.

Detailed Location:

Ecological:

Threats:

General:
KIT FOX OBSERVATION(S) IN 1973.

PLSS: T18S, R23E, Sec. 27 (M)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-11 N4023230 E277822
Latitude/Longitude: 36.32851 / -119.47521
Elevation (feet): 270

County Summary:
Kings, Tulare

Quad Summary:
Goshen (3611934)

Sources:
SWI73R0001 SWICK, C.D. - DETERMINATION OF SAN JOAQUIN KIT FOX RANGE IN CCA, SJQ, ALA & TUL COUNTIES, CDFG 1973-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67781
EO Index: 67933
Key Quad: Visalia (3611933)
Element Code: AMAJA03041
Occurrence Number: 904
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1975-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1975-07-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 3 MI SE OF VISALIA, JUST W OF INTERSECTION OF OAKDALE AVE AND CAMERON CREEK.

Detailed Location:

Ecological:

Threats:

General:
ROAD KILL FROM 1972 THROUGH JUL 1975.

PLSS: T19S, R25E, Sec. 04 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4019469 E296683
Latitude/Longitude: 36.29880 / -119.26426
Elevation (feet): 340

County Summary:	Quad Summary:
Tulare	Visalia (3611933)

Sources:
MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67784
EO Index: 67936
Key Quad: Goshen (3611934)
Element Code: AMAJA03041
Occurrence Number: 907
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1975-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1975-07-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 1.7 MI NE OF GOSHEN, NEAR INTERSECTION OF ALLISON RD AND MODOC DITCH.

Detailed Location:

Ecological:

Threats:

General:
SIGHTING SOMETIME FROM 1972 THROUGH JUL 1975.

PLSS: T18S, R24E, Sec. 17 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4026939 E285097
Latitude/Longitude: 36.36357 / -119.39525
Elevation (feet): 300

County Summary:	Quad Summary:
Tulare	Goshen (3611934)

Sources:
MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67801
EO Index: 67953
Key Quad: Remnoy (3611935)
Element Code: AMAJA03041
Occurrence Number: 920
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1975-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1975-07-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 7 MI SE OF HANFORD, W OF INTERSECTION OF IDAHO AVE AND 5TH AVE, IN THE VICINITY OF CROSS CREEK.

Detailed Location:

Ecological:

Threats:

General:
SIGHTING SOMETIME FROM 1972 THROUGH JUL 1975.

PLSS: T19S, R22E, Sec. 23 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4016852 E270729
Latitude/Longitude: 36.26940 / -119.55229
Elevation (feet): 240

County Summary:
Kings

Quad Summary:
Remnoy (3611935)

Sources:
MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67804
EO Index: 67954
Key Quad: Remnoy (3611935)
Element Code: AMAJA03041
Occurrence Number: 921
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1975-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1975-07-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 6.4 MI E OF HANFORD ON LACEY BLVD AT INTERSECTION WITH HIGHLINE CANAL.

Detailed Location:

Ecological:

Threats:

General:
ROAD KILL SOMETIME FROM 1972 THROUGH JUL 1975.

PLSS: T18S, R23E, Sec. 31 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4023137 E273025
Latitude/Longitude: 36.32655 / -119.52858
Elevation (feet): 250

County Summary:
Kings

Quad Summary:
Remnoy (3611935)

Sources:
MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67805
EO Index: 67955
Key Quad: Remnoy (3611935)
Element Code: AMAJA03041
Occurrence Number: 922
Occurrence Last Updated: 2007-02-20

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1971-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1971-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
JUST E OF HANFORD, JUST SW OF INTERSECTION OF HWY 198 AND 9 1/4 AVE. NORTH OF HANFORD MUNICIPAL AIRPORT.

Detailed Location:

Ecological:

Threats:

General:
SIGHTING, ROAD KILL OR DEN PRIOR TO 1972.

PLSS: T18S, R22E, Sec. 31 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4023304 E264304
Latitude/Longitude: 36.32597 / -119.62570
Elevation (feet): 250

County Summary:
Kings

Quad Summary:
Remnoy (3611935), Hanford (3611936)

Sources:
MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67806
EO Index: 67956
Key Quad: Remnoy (3611935)
Element Code: AMAJA03041
Occurrence Number: 923
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:
CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:
ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:
NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1975-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1975-07-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ABOUT 5.8 MI ENE OF HANFORD, 0.7 MI NE OF INTERSECTION OF 5TH AVE AND GRANGEVILLE BLVD.

Detailed Location:

Ecological:

Threats:

General:
SIGHTING SOMETIME FROM 1972 THROUGH JUL 1975.

PLSS: T18S, R22E, Sec. 24 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4026024 E272037
Latitude/Longitude: 36.35232 / -119.54042
Elevation (feet): 260

County Summary:	Quad Summary:
Kings	Remnoy (3611935)

Sources:

MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 67807
EO Index: 67957
Key Quad: Remnoy (3611935)
Element Code: AMAJA03041
Occurrence Number: 924
Occurrence Last Updated: 2007-01-17

Scientific Name: *Vulpes macrotis mutica*
Common Name: San Joaquin kit fox

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: Threatened
Other Lists:

CNDDB Element Ranks: **Global:** G4T2
State: S2

General Habitat:

ANNUAL GRASSLANDS OR GRASSY OPEN STAGES WITH SCATTERED SHRUBBY VEGETATION.

Micro Habitat:

NEED LOOSE-TEXTURED SANDY SOILS FOR BURROWING, AND SUITABLE PREY BASE.

Last Date Observed: 1975-07-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1975-07-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

ABOUT 8.3 MI ENE OF HANFORD & 4.7 MI NW OF GOSHEN, NEAR EAST BRANCH CROSS CREEK.

Detailed Location:

Ecological:

Threats:

General:

SIGHTING FROM 1972 THROUGH JUL 1975.

PLSS: T18S, R23E, Sec. 08 (M)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N4028199 E275554
Latitude/Longitude: 36.37274 / -119.50189
Elevation (feet): 260

County Summary:

Kings

Quad Summary:

Goshen (3611934), Remnoy (3611935), Traver (3611944), Burris Park (3611945)

Sources:

MOR75M0001 MORRELL, S.H. - MAPS (6) SHOWING SAN JOAQUIN KIT FOX DISTRIBUTION AND ABUNDANCE IN 1975. 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 32735
EO Index: 17486
Key Quad: Traver (3611944)
Element Code: ICBRA03030
Occurrence Number: 110
Occurrence Last Updated: 1995-12-15

Scientific Name: *Branchinecta lynchi*
Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed: 1992-02-22
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1992-02-22
Occurrence Rank: Unknown
Owner/Manager: PVT-HARRELL
Trend: Unknown
Presence: Presumed Extant

Location:

ESE OF TRAVER; 0.4 KM NW OF ROAD 80 AT COTTONWOOD CREEK.

Detailed Location:

HARRELL PROPERTY.

Ecological:

NATURAL POOL (SALTGRASS); 12 INCHES DEEP AT GREATEST DEPTH, PH=6.5.

Threats:

GRAZING (IN MIDST OF PRIME DAIRY DEVELOPMENT AREA); DEVELOPMENT (PROPOSAL FOR MODEL AIRCRAFT FIELD AS OF 1992).

General:

1 FEMALE (APPROX 16 MM IN LENGTH) OBSERVED BY R. HANSEN AND K. KIRKPATRICK; AMBYSTOMA CALIFORNIENSE OBSERVED NEAR SITE.

PLSS: T17S, R24E, Sec. 20, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4034868 E285123
Latitude/Longitude: 36.43500 / -119.39716
Elevation (feet): 285

County Summary:	Quad Summary:
Tulare	Traver (3611944)

Sources:

WOO92R0001 WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	32737	**EO Index:**	17096
Key Quad:	Goshen (3611934)	**Element Code:**	ICBRA03030
Occurrence Number:	111	**Occurrence Last Updated:**	2015-01-14

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1995-02-09	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1995-02-09	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.4 MILE NW OF THE INTERSECTION OF W GOSHEN AVENUE (ROAD J32) AND PLAZA DRIVE (ROAD J19), GOSHEN, WEST OF VISALIA.

Detailed Location:

MAPPED TO LOCATION GIVEN FOR OCCUPIED POOL ON JACUZZI PROPERTY, IN 1992 REPORT. SPECIMEN LOCALITY GIVEN ONLY AS "0.5 MI E OF GOSHEN CITY, T18S, R24E, S20, SW1/4;" ATTRIBUTED HERE.

Ecological:

NATIVE TOPOGRAPHY IN VACANT LOT; POOL WAS 9 INCHES DEEP; PH=6; FENCELINE OF LOT WAS DISKED; SURVEY MARKERS PRESENT.

Threats:

PROPOSED LAND CONVERSION; HISTORIC GRAZING.

General:

1 MALE BRANCHINECTA OBSERVED BY R. HANSEN AND K. KIRKPATRICK, 22 FEB 1992. 40 B. LYNCHI COLLECTED ON 6 FEB 1995 (CASIZ #103005 -103014). ANOTHER 30 COLLECTED 23 FEB-27 MAR 1995 (CASIZ #103290 & 11 OTHERS).

PLSS:	T18S, R24E, Sec. 20, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4024937 E284641	**Latitude/Longitude:**	36.34544 / -119.39978	**Elevation (feet):**	290

County Summary:	**Quad Summary:**
Tulare	Goshen (3611934)

Sources:

AVE95S0007	AVERY, S. - CASIZ #103005, 103006, 103007, 103008, 103009, 103010, 103011, 103012,103013, & 103014, COLLECTED "0.5 MI E OF GOSHEN CITY." 1995-02-06
GAN95S0003	GANZ, H. - CASIZ #103290, 103291, 103295, 103300, 103303, 103307, 103308, 103309, 103324, 103328, 103331, & 103334, COLLECTED "DUE EAST OF GOSHEN, 1 MILE EAST OF STATE HIGHWAY 99." 1995-03-27
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	32752	**EO Index:**	18594
Key Quad:	Traver (3611944)	**Element Code:**	ICBRA03030
Occurrence Number:	113	**Occurrence Last Updated:**	1996-01-29

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1993-01-09	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-01-09	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SSE OF TRAVER; APPROXIMATELY 1.0 KM NORTH OF HIGHWAY 99 AT CROSS CREEK.

Detailed Location:

Ecological:

POOL A: SLIGHT TURBIDITY, 10 X 30 M. POOL B: SLIGHT TURBIDITY, 10 X 50 M. POOL C: VERY TURBID, 10 X 50 M. ALL POOLS 54 DEGREES FAHRENHEIT.

Threats:

CURRENT LAND USE: CATTLE GRAZING; THREATS INCLUDE DEVELOPMENT OR HABITAT CONVERSION.

General:

B. LYNCHI OBSERVED BY G. AND K. KIRKPATRICK, AND R. HANSEN.

PLSS:	T17S, R23E, Sec. 35, NW (M)	**Accuracy:**	specific area	**Area (acres):**	15
UTM:	Zone-11 N4032699 E279792	**Latitude/Longitude:**	36.41425 / -119.45597	**Elevation (feet):**	270

County Summary:	**Quad Summary:**
Tulare	Traver (3611944)

Sources:

WOO93R0002 WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR VERNAL POOL FAIRY SHRIMP (BRANCHINECTA LYNCHI) IN TULARE COUNTY, CALIFORNIA. 1993-09-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	32753	**EO Index:**	17094
Key Quad:	Monson (3611943)	**Element Code:**	ICBRA03030
Occurrence Number:	114	**Occurrence Last Updated:**	1996-01-29

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1993-02-23	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-02-23	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT-MACDONALD	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST OF SEQUOIA FIELD; APPROX. 0.6 MILE WEST OF ROAD 112, JUST NORTH OF AVENUE 360.

Detailed Location:

Ecological:

SMALL GRASS-BOTTOMED POOL APPROX. 5 X 10 METERS OVAL, 12 INCHES DEEP; MIMA TOPOGRAPHY IN PASTURE BUT FEW POOLS.

Threats:

CURRENT LAND USE: HORSE PASTURE, THREATS INCLUDE: LAND CONVERSION.

General:

B. LYNCHI OBSERVED BY G. KIRKPATRICK; SPECIMENS POSSESSED UNUSUAL EYESTALKS-ALL DARK INCLUDING STALK.

PLSS:	T17S, R24E, Sec. 14, SE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4035785 E290935	**Latitude/Longitude:**	36.44454 / -119.33262	**Elevation (feet):**	305

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

WOO93R0002 WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR VERNAL POOL FAIRY SHRIMP (BRANCHINECTA LYNCHI) IN TULARE COUNTY, CALIFORNIA. 1993-09-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	32754	**EO Index:**	17093
Key Quad:	Monson (3611943)	**Element Code:**	ICBRA03030
Occurrence Number:	115	**Occurrence Last Updated:**	1996-01-29

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1993-02-23	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-02-23	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT-HETTICK	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST OF SEQUOIA FIELD, 0.6 MILE SOUTH OF ELKHORN AVENUE, 0.6 MILE WEST OF HIGHWAY 63 (DINUBA BLVD).

Detailed Location:

HETTICK PROPERTY.

Ecological:

SMALL TRIANGULAR SHAPED POOL, 11 INCHES DEEP, 65 DEGREES FAHRENHEIT, PH 7.3, CLEAR TEA-COLORED WATER WITH LOTS OF EMERGENT VEGETATION AND FILAMENTOUS ALGAE.

Threats:

CURRENT LAND USE: LIVESTOCK GRAZING; THREAT INCLUDES: LAND CONVERSION.

General:

B. LYNCHI, TADPOLE SHRIMP (LEPIDURUS COUESII) AND AMBYSTOMA CALIFORNIENSE OBSERVED BY G. KIRKPATRICK.

PLSS:	T17S, R25E, Sec. 18, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4036231 E293366	**Latitude/Longitude:**	36.44909 / -119.30564	**Elevation (feet):**	317

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

WOO93R0002 WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR VERNAL POOL FAIRY SHRIMP (BRANCHINECTA LYNCHI) IN TULARE COUNTY, CALIFORNIA. 1993-09-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	41569	**EO Index:**	41569
Key Quad:	Burris Park (3611945)	**Element Code:**	ICBRA03030
Occurrence Number:	206	**Occurrence Last Updated:**	2014-10-24

Scientific Name: *Branchinecta lynchi*

Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened

State: None

Rare Plant Rank:

Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	1999-03-14	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1999-03-14	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.2 MILE WEST OF CROSS CREEK, 1.8 MILES SE OF JUNCTION OF 4TH AVENUE AND EXCELSIOR AVE, 6 MILES SW OF BURRIS PARK.

Detailed Location:

MAPPED TO LOCATION PROVIDED FOR VERNAL POOL(S) IN AREA "B."

Ecological:

VERNAL POOLS IN GRAZED, NON-NATIVE GRASSLAND.

Threats:

DEVELOPMENT TO FARMLAND (1999).

General:

HUNDREDS OBSERVED HERE AND IN AREA "A" (OCCURRENCE #207). 64 COLLECTED 21 FEB-14 MAR 1999 (CASIZ #122186-122193).

PLSS:	T18S, R23E, Sec. 08, NW (M)	**Accuracy:**	1/10 mile	**Area (acres):**	0
UTM:	Zone-11 N4029189 E275010	**Latitude/Longitude:**	36.38153 / -119.50824	**Elevation (feet):**	260

County Summary:	**Quad Summary:**
Kings	Burris Park (3611945)

Sources:

HAL99F0003	HALSTEAD, J. & P. HALSTEAD - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI (VERNAL POOL FAIRY SHRIMP) 1999-03-04
HAL99S0013	HALSTEAD, J. - CASIZ #122186, 122187, 122188, 122189, 122190, 122191, 122192, & 122193, COLLECTED "12 MI NW VISALIA, SECTIONS 4& 8, T18S, R23E... VERNAL POOL GRASSLANDS NEAR CROSS CREEK." 1999-02-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 41571
EO Index: 41571
Key Quad: Traver (3611944)
Element Code: ICBRA03030
Occurrence Number: 207
Occurrence Last Updated: 2014-10-24

Scientific Name: *Branchinecta lynchi*
Common Name: vernal pool fairy shrimp

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed: 1999-03-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1999-03-14
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.2 MILE NORTH OF CROSS CREEK AND 1.65 WSW OF WHERE IT CROSSES HIGHWAY 99, 4 MILES SOUTH OF TRAVER.

Detailed Location:

MAPPED TO LOCATION PROVIDED FOR VERNAL POOL(S) IN AREA "A."

Ecological:

VERNAL POOLS IN GRAZED, NON-NATIVE GRASSLAND.

Threats:

CONVERSION TO FARMLAND (1999).

General:

HUNDREDS OBSERVED HERE AND IN AREA "B" (OCCURRENCE #206). 64 COLLECTED 21 FEB-14 MAR 1999 (CASIZ #122186-122193).

PLSS: T18S, R23E, Sec. 04, N (M)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-11 N4030766 E277170
Latitude/Longitude: 36.39623 / -119.48463
Elevation (feet): 265

County Summary:

Kings

Quad Summary:

Traver (3611944)

Sources:

HAL99F0004 HALSTEAD, J.A. & P.S. HALSTEAD - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI (VERNAL POOL FAIRY SHRIMP) 1999-03-04

HAL99S0013 HALSTEAD, J. - CASIZ #122186, 122187, 122188, 122189, 122190, 122191, 122192, & 122193, COLLECTED "12 MI NW VISALIA, SECTIONS 4& 8, T18S, R23E... VERNAL POOL GRASSLANDS NEAR CROSS CREEK." 1999-02-22

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	45196	**EO Index:**	45196
Key Quad:	Monson (3611943)	**Element Code:**	ICBRA03030
Occurrence Number:	292	**Occurrence Last Updated:**	2014-10-24

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2001-03-24	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2001-03-24	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.6 MILE WEST OF THE INTERSECTION OF AVENUE 360 AND ROAD 140, 9 MILES NORTH OF VISALIA.

Detailed Location:

SPECIMEN LOCALITY GIVEN AS "9 MI N OF VISALIA, SECTION 16, TOWNSHIP 17S, RANGE 25E," ATTRIBUTED HERE.

Ecological:

VERNAL POOLS IN GRAZED NON-NATIVE GRASSLAND SURROUNDED BY AGRICULTURAL FIELDS.

Threats:

THREATENED BY CONVERSION TO ORCHARDS.

General:

THOUSANDS OF ADULTS OBSERVED ON 24 MAR 2001; 20 COLLECTED AND DEPOSITED AT CAS (12 IN CASIZ #150412).

PLSS:	T17S, R25E, Sec. 16, SW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4035590 E296566	**Latitude/Longitude:**	36.44400 / -119.26978	**Elevation (feet):**	330

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

HAL01F0001	HALSTEAD, J.A. & P.S. HALSTEAD (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2001-03-24
HAL01S0032	HALSTEAD, J. - CASIZ #150412, COLLECTED "9 MI N OF VISALIA, SECTION 16, TOWNSHIP 17S, RANGE 25E." 2001-03-24

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	94258	**EO Index:**	64378
Key Quad:	Orange Cove North (3611963)	**Element Code:**	ICBRA03030
Occurrence Number:	401	**Occurrence Last Updated:**	2014-11-13

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2010-02-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2014-03-25	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT-WILDLANDS INC	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

FROM THE INTERSECTION OF AVENUE 460 AND ROAD 136 TO 0.7 MILE NORTH AND NE OF THE INTERSECTION, EAST OF ORANGE COVE.

Detailed Location:

SAND CREEK CONSERVATION BANK. EXACT DETECTION LOCATIONS NOT GIVEN, 2003-2008. MAPPED TO LOCATIONS GIVEN FOR OCCUPIED POOLS IN 2010 FIELD SURVEY FORM.

Ecological:

527 ACRE BANK WITH 23 ACRES OF NATURAL VERNAL POOLS AND SWALES, DENSEST IN NORTHERN PART OF PROPERTY. SEVERAL LARGE CLAY INCLUSIONS SUPPORT LARGE POOLS IN CENTER OF PROPERTY. FLAT TO GENTLY-ROLLING TOPOGRAPHY.

Threats:

General:

DETECTED 29 JAN 2003 & 21 JAN 2005. FOUND IN UP TO 6 OF 25 POOLS, FEB-MAY 2006. OVER 50 FOUND IN 8 OF 28 POOLS, 21 FEB 2008. 100 FOUND IN 15 POOLS (14 MAPPED HERE, SEE ALSO OCC #843), 18 FEB 2010. 0 FOUND IN 200 POOLS, JAN-MAR 2014.

PLSS:	T15S, R25E, Sec. 16 (M)	**Accuracy:**	specific area	**Area (acres):**	54
UTM:	Zone-11 N4056305 E297351	**Latitude/Longitude:**	36.63076 / -119.26648	**Elevation (feet):**	490

County Summary:	**Quad Summary:**
Tulare	Orange Cove South (3611953), Orange Cove North (3611963)

Sources:

MUN06F0008	MUNSON, S. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2006-04-14
RAN03F0002	RANLETT, J. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2003-01-29
RAN05F0003	RANLETT, J. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2005-01-21
ROB10F0018	ROBINSON, J. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI & BRANCHINECTA MESOVALLENSIS & LEPIDURUS PACKARDI 2010-02-18
ROP14R0001	ROPER, B. (WILDLANDS, INC.) - VERNAL POOL LARGE BRANCHIOPODS SURVEY 2014 ANNUAL REPORT, SECTION 10 (A) (1) (A) PERMIT NO. TE-12271B-O 2014-06-XX
WIL06R0001	WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2006 ANNUAL REPORT 2006-08-XX
WIL08R0001	WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2008 ANNUAL REPORT 2008-03-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	72250	**EO Index:**	73200
Key Quad:	Orange Cove South (3611953)	**Element Code:**	ICBRA03030
Occurrence Number:	618	**Occurrence Last Updated:**	2008-09-12

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2005-03-29	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2005-03-29	**Occurrence Rank:**	Unknown
Owner/Manager:	USBOR, PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

E SIDE OF FRIANT-KERN CANAL AT MILEPOST 043.37, 100 YARDS SE OF BM 444, 0.9 MI SSE OF CITRUS SCHOOL; NEAR ORANGE COVE.

Detailed Location:

MAPPED TO PROVIDED COORDINATES IN SHAPEFILE. POOL ID FKC-R-043.37.1.

Ecological:

HABITAT DESCRIBED AS A TURBID, SHALLOW, ROADSIDE SWALE ADJACENT TO TRI-COUNTY CITRUS PACKERS. TIRE DISTURBANCE. NO EMERGENT VEG. SOIL CLAYISH. ADJACENT TO SMALL, MAN-MADE, RECTANGULAR POND (POSSIBLY OLD WATER TREATMENT SITE).

Threats:

General:

3 MALES & 3 FEMALES IDENTIFIED ON 29 MAR 2005 BY K. GARCIA-TOMLINSON.

PLSS:	T15S, R25E, Sec. 19, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4054829 E294023	**Latitude/Longitude:**	36.61675 / -119.30327	**Elevation (feet):**	439

County Summary:	**Quad Summary:**
Tulare	Orange Cove South (3611953)

Sources:

ESR08D0001	ESRP (CALIFORNIA STATE UNIVERSITY, STANISLAUS) - SHAPEFILE OF SURVEYS OF THE US BUREAU OF RECLAMATION RIGHT-OF-WAYS ALONG THE FRIANT-KERN AND MADERA CANALS (2004-2008). 2008-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	94259	**EO Index:**	95381
Key Quad:	Orange Cove South (3611953)	**Element Code:**	ICBRA03030
Occurrence Number:	843	**Occurrence Last Updated:**	2014-11-13

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2010-02-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2014-03-25	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT-WILDLANDS, INC	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SAND CREEK CONSERVATION BANK, NORTH SIDE OF AVENUE 460, 0.8 MILE EAST OF ROAD 136, EAST OF ORANGE COVE.

Detailed Location:

EXACT DETECTION LOCATIONS NOT GIVEN, 2003-2008. MAPPED TO LOCATIONS GIVEN FOR OCCUPIED POOLS IN 2010 FIELD SURVEY FORM.

Ecological:

527 ACRE BANK WITH 23 ACRES OF NATURAL VERNAL POOLS AND SWALES, DENSEST IN NORTHERN PART OF PROPERTY. SEVERAL LARGE CLAY INCLUSIONS SUPPORT LARGE POOLS IN CENTER OF PROPERTY. FLAT TO GENTLY-ROLLING TOPOGRAPHY.

Threats:

General:

DETECTED ON PROPERTY IN 2003, 2005, 2006, AND 2008. 100 ADULTS FOUND IN 15 POOLS (1 MAPPED HERE, SEE ALSO OCCURRENCE #401), 18 FEB 2010. NONE FOUND IN 200 POOLS SURVEYED JAN - MAR 2014.

PLSS:	T15S, R25E, Sec. 16, NE (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4055604 E298436	**Latitude/Longitude:**	36.62468 / -119.25416	**Elevation (feet):**	490

County Summary:	**Quad Summary:**
Tulare	Orange Cove South (3611953), Orange Cove North (3611963)

Sources:

MUN06F0008	MUNSON, S. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2006-04-14
RAN03F0002	RANLETT, J. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2003-01-29
RAN05F0003	RANLETT, J. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI 2005-01-21
ROB10F0018	ROBINSON, J. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR BRANCHINECTA LYNCHI & BRANCHINECTA MESOVALLENSIS & LEPIDURUS PACKARDI 2010-02-18
ROP14R0001	ROPER, B. (WILDLANDS, INC.) - VERNAL POOL LARGE BRANCHIOPODS SURVEY 2014 ANNUAL REPORT, SECTION 10 (A) (1) (A) PERMIT NO. TE-12271B-O 2014-06-XX
WIL06R0001	WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2006 ANNUAL REPORT 2006-08-XX
WIL08R0001	WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2008 ANNUAL REPORT 2008-03-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	94288	**EO Index:**	95405
Key Quad:	Ivanhoe (3611942)	**Element Code:**	ICBRA03030
Occurrence Number:	849	**Occurrence Last Updated:**	2014-10-24

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2008-03-13	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2008-03-13	**Occurrence Rank:**	Unknown
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST OF ROAD 144, 0.2-0.3 MILE N OF PIEDRA AVE (AVE 376), STONE CORRAL ECOLOGICAL RESERVE, SW OF SEVILLE, N OF VISALIA.

Detailed Location:

MAPPED TO PROVIDED DIGITAL DATA. LOCATION DESCRIPTION "STONE CORRAL ER-ROAD 144 UNIT."

Ecological:

WESTERN TOAD LARVAE ALSO FOUND.

Threats:

General:

DETECTED IN 3 POOLS ON 13 MAR 2008.

PLSS:	T17S, R25E, Sec. 03, SE (M)	**Accuracy:**	specific area	**Area (acres):**	14
UTM:	Zone-11 N4039127 E298671	**Latitude/Longitude:**	36.47630 / -119.24723	**Elevation (feet):**	335

County Summary:	**Quad Summary:**
Tulare	Ivanhoe (3611942), Monson (3611943)

Sources:

TEN09D0001 TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	94290	**EO Index:**	95408
Key Quad:	Monson (3611943)	**Element Code:**	ICBRA03030
Occurrence Number:	850	**Occurrence Last Updated:**	2014-10-24

Scientific Name: *Branchinecta lynchi* **Common Name:** vernal pool fairy shrimp

Listing Status: **Federal:** Threatened **Rare Plant Rank:**

State: None **Other Lists:** IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G3

State: S3

General Habitat:

ENDEMIC TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MOUNTAINS, AND SOUTH COAST MOUNTAINS, IN ASTATIC RAIN-FILLED POOLS.

Micro Habitat:

INHABIT SMALL, CLEAR-WATER SANDSTONE-DEPRESSION POOLS AND GRASSED SWALE, EARTH SLUMP, OR BASALT-FLOW DEPRESSION POOLS.

Last Date Observed:	2008-03-13	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2008-03-13	**Occurrence Rank:**	Unknown
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.7 TO 1.3 MILES NW OF THE INTERSECTION OF HWY 63 (ROAD 124) AND AVE 352, STONE CORRAL ECOLOGICAL RESERVE, N OF VISALIA.

Detailed Location:

MAPPED TO PROVIDED DIGITAL DATA. LOCATION DESCRIPTION "STONE CORRAL ER-SEQUOIA FIELD UNIT."

Ecological:

TREE FROG EGG MASSES ALSO FOUND.

Threats:

General:

FOUND IN 12 POOLS ON 29 FEB AND 13 MAR 2008.

PLSS:	T17S, R25E, Sec. 19, W (M)	**Accuracy:**	specific area	**Area (acres):**	51
UTM:	Zone-11 N4034732 E292788	**Latitude/Longitude:**	36.43546 / -119.31168	**Elevation (feet):**	315

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

TEN09D0001 TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 40395
EO Index: 35402
Key Quad: Traver (3611944)
Element Code: ICBRA10010
Occurrence Number: 129
Occurrence Last Updated: 2015-02-19

Scientific Name: *Lepidurus packardi*
Common Name: vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered
State: None
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4
State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed: 1998-04-10
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1998-04-10
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

SOUTH OF CROSS CREEK, ABOUT 1.5 MILES NNE OF HIGHWAY 99 AT AVE 328, 4.5 MILES SE OF TRAVER.

Detailed Location:

Ecological:

NON-NATIVE ANNUAL GRASSLAND WITH VERNAL POOLS. BURROWING OWLS ALSO OBSERVED IN THE VICINITY. AGRICULTURE TO SOUTH AND EAST. AIR PHOTOS FROM 2014 SHOW POSSIBLE CHANGE IN HYDROLOGY (FLOODING OF FIELD ADJACENT TO IRRIGATION DITCH).

Threats:

THREATENED BY AGRICULTURAL CONVERSION (1998).

General:

100S OF TADPOLE SHRIMP OBSERVED ON 10 APRIL 1998. 20 COLLECTED, 15 IN CAS (CASIZ #118377).

PLSS: T17S, R23E, Sec. 35, SE (M)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-11 N4031773 E281054
Latitude/Longitude: 36.40620 / -119.44165
Elevation (feet): 280

County Summary:

Tulare

Quad Summary:

Traver (3611944)

Sources:

HAL98F0001	HALSTEAD, J.A. & P.S. HALSTEAD (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 1998-04-10
HAL98S0003	HALSTEAD, J. - CASIZ #118377, COLLECTED "10 MILES NW OF VISALIA, T17S R23S, NE1/4 OF SE1/4 OF SEC 35." 1998-04-10
HAL98U0001	HALSTEAD, J. A. - SCIENTIFIC COLLECTING REPORT OF SPECIMENS COLLECTED 1998-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	41568	**EO Index:**	41568
Key Quad:	Burris Park (3611945)	**Element Code:**	ICBRA10010
Occurrence Number:	139	**Occurrence Last Updated:**	2015-02-20

Scientific Name: *Lepidurus packardi* **Common Name:** vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: None **Other Lists:** IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4

State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed:	1999-03-14	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1999-03-14	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.3 MILE WEST OF CROSS CREEK, 1.8 MILES SE OF JUNCTION OF 4TH AVENUE AND EXCELSIOR AVE, ABOUT 6 MILES SW OF BURRIS PARK.

Detailed Location:

VERNAL POOL(S) IN AREA "B." CURRENT LAND USE IS CATTLE GRAZING.

Ecological:

VERNAL POOLS IN NON-NATIVE GRASSLAND.

Threats:

CONVERSION TO FARMLAND.

General:

100S OBSERVED HERE AND IN AREA "A" (OCCURRENCE #140). COLLECTIONS DEPOSITED AT CAS (CASIZ #122199, 122200, 122201, & 122202).

PLSS:	T18S, R23E, Sec. 08, NW (M)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N4029109 E274859	**Latitude/Longitude:**	36.38078 / -119.50990	**Elevation (feet):**	260

County Summary:	**Quad Summary:**
Kings	Burris Park (3611945)

Sources:

HAL99F0001	HALSTEAD, J.A. & P.S. HALSTEAD - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI (TADPOLE SHRIMP) 1999-03-04
HAL99S0010	HALSTEAD, J. - CASIZ #122199, 122201, & 122202, COLLECTED FROM "12 MI NW VISALIA, SECTIONS 4 & 8, T18S, R23E... VERNAL POOL GRASSLANDS NEAR CROSS CREEK." 1999-03-14
HAL99S0011	HALSTEAD, J. - CASIZ #122200, COLLECTED FROM "12 MI NW VISALIA, SECTIONS 4 & 8, T18S, R23E... VERNAL POOL GRASSLANDS NEAR CROSS CREEK." 1999-03-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 41572
EO Index: 41572
Key Quad: Traver (3611944)
Element Code: ICBRA10010
Occurrence Number: 140
Occurrence Last Updated: 2015-02-20

Scientific Name: *Lepidurus packardi*
Common Name: vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered
State: None
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4
State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed: 1999-03-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1999-03-14
Occurrence Rank: Fair
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

0.2 MILE NORTH OF CROSS CREEK AND 1.6 WSW OF WHERE IT CROSSES HIGHWAY 99, 4 MILES SOUTH OF TRAVER.

Detailed Location:

VERNAL POOL(S) IN AREA "A." CURRENT LAND USE IS CATTLE GRAZING.

Ecological:

VERNAL POOLS IN NON-NATIVE GRASSLAND.

Threats:

CONVERSION TO FARMLAND.

General:

100S OBSERVED HERE AND IN AREA "B" (OCCURRENCE #139). COLLECTIONS DEPOSITED AT CAS (CASIZ #122199, 122200, 122201, & 122202).

PLSS: T18S, R23E, Sec. 04, N (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4030812 E277271
Latitude/Longitude: 36.39668 / -119.48353
Elevation (feet): 265

County Summary:

Kings

Quad Summary:

Traver (3611944)

Sources:

HAL99F0002	HALSTEAD, J.A. & P.S. HALSTEAD - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI (TADPOLE SHRIMP) 1999-03-04
HAL99S0010	HALSTEAD, J. - CASIZ #122199, 122201, & 122202, COLLECTED FROM "12 MI NW VISALIA, SECTIONS 4 & 8, T18S, R23E... VERNAL POOL GRASSLANDS NEAR CROSS CREEK." 1999-03-14
HAL99S0011	HALSTEAD, J. - CASIZ #122200, COLLECTED FROM "12 MI NW VISALIA, SECTIONS 4 & 8, T18S, R23E... VERNAL POOL GRASSLANDS NEAR CROSS CREEK." 1999-03-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	45197	**EO Index:**	45197
Key Quad:	Monson (3611943)	**Element Code:**	ICBRA10010
Occurrence Number:	163	**Occurrence Last Updated:**	2015-06-08

Scientific Name: *Lepidurus packardi* **Common Name:** vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: None **Other Lists:** IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4

State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed:	2002-02-14	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2002-02-14	**Occurrence Rank:**	Fair
Owner/Manager:	PVT, DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

0.6 MILE NW OF THE INTERSECTION OF AVENUE 360 AND ROAD 140, 9 MILES NORTH OF VISALIA.

Detailed Location:

NW POLYGON MAPPED TO LOCATION GIVEN FOR 2001 DETECTION, ON PRIVATE PROPERTY. SE POLYGON MAPPED TO COORDINATES GIVEN FOR 2002 DETECTION, ON STONE CORRAL ECOLOGICAL RESERVE.

Ecological:

2001: VERNAL POOLS SURROUNDED BY GRAZED NON-NATIVE GRASSLAND; SURROUNDED BY AGRICULTURAL FIELDS. 2002: TURBID, CLAY-BOTTOMED VERNAL POOL, APPROX. 600M^2, IN HISTORICALLY GRAZED NON-NATIVE GRASSLAND ON ROLLING TOPOGRAPHY.

Threats:

THREATENED BY CONVERSION TO ORCHARDS (2001, 2002).

General:

1000S OF ADULTS OBSERVED ON 24 MAR 2001, 10 COLLECTED AND DEPOSITED AT CAS (CASIZ #150413). 2 ADULTS OBSERVED ON 14 FEB 2002.

PLSS:	T17S, R25E, Sec. 16, SW (M)	**Accuracy:**	nonspecific area	**Area (acres):**	10
UTM:	Zone-11 N4036180 E296752	**Latitude/Longitude:**	36.44935 / -119.26787	**Elevation (feet):**	330

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

HAL01F0002	HALSTEAD, J.A. & P.S. HALSTEAD (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 2001-03-24
HAL01S0031	HALSTEAD, J. - CASIZ #150413, COLLECTED FROM "9 MI N OF VISALIA, SECTION 16, TOWNSHIP 17S, RANGE 25E." 2001-03-24
NEW02F0001	NEWMAN, D. - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 2002-02-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	62195	**EO Index:**	67386
Key Quad:	Orange Cove North (3611963)	**Element Code:**	ICBRA10010
Occurrence Number:	246	**Occurrence Last Updated:**	2015-02-27

Scientific Name: *Lepidurus packardi* **Common Name:** vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: None **Other Lists:** IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4

State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed:	2006-02-21	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2008-03-18	**Occurrence Rank:**	Excellent
Owner/Manager:	PVT-WILDLANDS INC	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SAND CREEK CONSERVATION BANK, FROM ABOUT 0.5 MI S-0.7 MI N OF SAND CREEK RD, 0.5-1.6 MI E OF ROAD 132, E OF ORANGE COVE.

Detailed Location:

Ecological:

527-ACRE CONSERVATION BANK CONTAINING ABOUT 23 ACRES OF NATURAL VERNAL POOLS AND VERNAL SWALES.

Threats:

General:

FOUND IN UP TO 6 POOLS OF MORE THAN 25 SAMPLED OVER 5 VISITS 21 FEB-23 MAY 2006. 10+ ADULTS AND 10+ JUVENILES OBSERVED ON 21 FEB 2006. NOT FOUND IN 28 POOLS SAMPLED JAN-MAR 2008.

PLSS:	T15S, R25E, Sec. 16 (M)	**Accuracy:**	nonspecific area	**Area (acres):**	581
UTM:	Zone-11 N4055958 E297728	**Latitude/Longitude:**	36.62772 / -119.26217	**Elevation (feet):**	420

County Summary:	**Quad Summary:**
Tulare	Orange Cove South (3611953), Tucker Mtn. (3611962), Orange Cove North (3611963)

Sources:

MUN06F0004	MUNSON, S. (WILDLANDS, INC.) - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 2006-02-21
WIL06R0001	WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2006 ANNUAL REPORT 2006-08-XX
WIL08R0001	WILDLANDS, INC. - VERNAL POOL BRANCHIOPOD SURVEY, 2008 ANNUAL REPORT 2008-03-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	86216	**EO Index:**	87257
Key Quad:	Traver (3611944)	**Element Code:**	ICBRA10010
Occurrence Number:	292	**Occurrence Last Updated:**	2012-06-29

Scientific Name: *Lepidurus packardi* **Common Name:** vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: None **Other Lists:** IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4

State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed:	1992-06-22	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-05-24	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

WEST SIDE OF ROAD 80 (ALTA AVE) ALONG COTTONWOOD CREEK ABOUT 0.5 MILE SOUTH OF AVENUE 360, ABOUT 5 MILES ESE OF TRAVER.

Detailed Location:

MAPPED GENERALLY TO PROJECT SITE AND GENERAL LOCATION DESCRIPTIONS OF POOLS; NOTED AS "COMMON IN THE TURBID WATER OF POOL #3," AND FOUND "IN COTTONWOOD CREEK" AND "IN THE IRRIGATION CANAL..."

Ecological:

NATURAL COMMUNITIES ON SITE INCLUDED NON-NATIVE GRASSLAND, NORTHEN CLAYPAN VERNAL POOL, GREAT VALLEY WILLOW SCRUB, VALLEY SACATON GRASSLAND, & VALLEY WILDRYE GRASSLAND. NO CHANGE BETWEEN 1994 & 2011 AERIAL; DISKING APPARENT IN 2011 IMAGE.

Threats:

General:

DETECTED AND PHOTOGRAPHED ON 21 MAR, 21 & 22 JUN, 1992. NONE DETECTED WHEN 7 VERNAL POOLS WERE SAMPLED (NON-PROTOCOL) IN THE NE 1/4 OF FEATURE ALONG CANAL IN 2011. FURTHER SAMPLING NEEDED.

PLSS:	T17S, R24E, Sec. 20, SW (M)	**Accuracy:**	nonspecific area	**Area (acres):**	132
UTM:	Zone-11 N4034765 E285094	**Latitude/Longitude:**	36.43406 / -119.39746	**Elevation (feet):**	285

County Summary:	**Quad Summary:**
Tulare	Traver (3611944)

Sources:

HAL11R0001	HALSTEAD & ASSOCIATES - CALIFORNIA TIGER SALAMANDER SURVEY REPORT FOR MILKY WAY DAIRY'S DRYLAND FARMING ACTIVITIES ALONG CROSS CREEK NEAR VISALIA (TULARE COUNTY, CALIFORNIA). 2011-12-XX
HAN92R0001	HANSEN, R. B. - BIOLOGICAL ASSESSMENT OF NATURAL HABITAT AREAS & SENSITIVE SPECIES STATUS ON THE SITE OF A PROPOSED REGIONAL FLYING SITE... (HARRELL RANCH) IN TULARE COUNTY, CA. 1992-07-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	86221	**EO Index:**	87258
Key Quad:	Traver (3611944)	**Element Code:**	ICBRA10010
Occurrence Number:	293	**Occurrence Last Updated:**	2012-06-28

Scientific Name: *Lepidurus packardi* **Common Name:** vernal pool tadpole shrimp

Listing Status:	**Federal:**	Endangered	**Rare Plant Rank:**	
	State:	None	**Other Lists:**	IUCN_EN-Endangered
CNDDB Element Ranks:	**Global:**	G4		
	State:	S3S4		

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed:	2011-05-24	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-05-24	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

VICINITY OF CROSS CREEK (COTTONWOOD CRK) ABOUT 1.3 MI SW OF ROAD 80 (ALTA AVE) AT AVE 360, & ABOUT 4.7 MI ESE OF TRAVER.

Detailed Location:

MAPPED GENERALLY TO PROVIDED TOPOGRAPHIC AND AERIAL MAPS (GEOREFERENCED). THIS SITE REPRESENTS THE GENERAL AREA OF 2 VERNAL POOLS (#48 & 50) OF 64 ON THE PROJECT SITE THAT CONTAINED VERNAL POOL TADPOLE SHRIMP.

Ecological:

HABITAT DESCRIBED AS NON-NATIVE GRASSLANDS, BUT WAS RECENTLY DISKED (OCT 2010) AND PLANTED WITH WHEAT. SITE HAS NOT BEEN LEVELED LIKE ADJACENT AGRICULTURE LANDS. WESTERN SPADEFOOT TOAD (SPEA HAMMONDII) ALSO FOUND ON SITE.

Threats:

THREATENED BY CONVERSION TO AGRICULTURE AND ALTERATIONS TO VERNAL POOL GEOMORPHOLOGY.

General:

UNKNOWN NUMBER OF LEPIDURUS PACKARDI DETECTED IN TWO VERNAL POOLS DURING 3 SURVEYS (NON-PROTOCOL) FROM 1 APR - 24 MAY 2011. ABOUT 10 TOTAL ADULTS WERE DETECTED IN 3 POOLS FROM SITE.

PLSS:	T17S, R24E, Sec. 30, NE (M)	**Accuracy:**	nonspecific area	**Area (acres):**	48
UTM:	Zone-11 N4034238 E284038	**Latitude/Longitude:**	36.42907 / -119.40907	**Elevation (feet):**	285

County Summary:	**Quad Summary:**
Tulare	Traver (3611944)

Sources:

HAL11F0019	HALSTEAD, J. & A. ROBERTS (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 2011-04-25
HAL11R0001	HALSTEAD & ASSOCIATES - CALIFORNIA TIGER SALAMANDER SURVEY REPORT FOR MILKY WAY DAIRY'S DRYLAND FARMING ACTIVITIES ALONG CROSS CREEK NEAR VISALIA (TULARE COUNTY, CALIFORNIA). 2011-12-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	86222	**EO Index:**	87264
Key Quad:	Traver (3611944)	**Element Code:**	ICBRA10010
Occurrence Number:	294	**Occurrence Last Updated:**	2012-06-28

Scientific Name: *Lepidurus packardi* **Common Name:** vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: None **Other Lists:** IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4

State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed:	2011-05-16	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-05-16	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

EAST SIDE OF HWY 99, ABOUT 1/4 MILE NORTH OF WHERE CROSS CREEK PASSES UNDER HWY 99, ABOUT 3.6 MI SSE OF TRAVER.

Detailed Location:

VERNAL POOL #6. MAPPED GENERALLY TO TOPOGRAPHIC AND AERIAL MAPS (GEOREFERENCED). VERNAL POOL TADPOLE SHRIMP DETECTED IN 3 OF 64 POOLS ON THE PROJECT SITE.

Ecological:

HABITAT DESCRIBED AS NON-NATIVE GRASSLANDS, BUT WAS RECENTLY DISKED (OCT 2010) AND PLANTED WITH WHEAT. SITE HAS NOT BEEN LEVELED LIKE ADJACENT AGRICULTURE LANDS. WESTERN SPADEFOOT TOAD (SPEA HAMMONDII) ALSO FOUND ON SITE.

Threats:

THREATENED BY CONVERSION TO AGRICULTURE AND ALTERATIONS TO VERNAL POOL GEOMORPHOLOGY.

General:

UNKNOWN NUMBER OF LEPIDURUS PACKARDI DETECTED IN THIS VERNAL POOL DURING 3 SURVEYS (NON-PROTOCOL) FROM 18 MAR - 16 MAY 2011. ABOUT 10 TOTAL ADULTS WERE DETECTED IN 3 POOLS FROM SITE.

PLSS:	T17S, R23E, Sec. 35, E (M)	**Accuracy:**	1/10 mile	**Area (acres):**	0
UTM:	Zone-11 N4032047 E279765	**Latitude/Longitude:**	36.40837 / -119.45608	**Elevation (feet):**	275

County Summary:	**Quad Summary:**
Tulare	Traver (3611944)

Sources:

HAL11F0019	HALSTEAD, J. & A. ROBERTS (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 2011-04-25
HAL11R0001	HALSTEAD & ASSOCIATES - CALIFORNIA TIGER SALAMANDER SURVEY REPORT FOR MILKY WAY DAIRY'S DRYLAND FARMING ACTIVITIES ALONG CROSS CREEK NEAR VISALIA (TULARE COUNTY, CALIFORNIA). 2011-12-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 86223
EO Index: 87265
Key Quad: Traver (3611944)
Element Code: ICBRA10010
Occurrence Number: 295
Occurrence Last Updated: 2012-06-28

Scientific Name: *Lepidurus packardi*
Common Name: vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered
State: None
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4
State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed: 2007-05-17
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2007-05-17
Occurrence Rank: Good
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

WEST SIDE OF HWY 99, ABOUT 260 YARDS SOUTH OF WHERE CROSS CREEK PASSES UNDER HWY 99, ABOUT 4 MILES SSE OF TRAVER.

Detailed Location:

MAPPED TO PROVIDED MAPS. ADJACENT TO ROAD 60 WHICH IS A FRONTAGE ROAD TO HWY 99.

Ecological:

WETLAND POND IN INTERMITTENT DRAINAGE OF CROSS CREEK SURROUNDED BY NON-NATIVE ANNUAL GRASSLAND USED FOR CATTLE GRAZING.

Threats:

General:

ABOUT 30 ADULTS DETECTED ON 17 MAY 2007.

PLSS: T17S, R23E, Sec. 35, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4031370 E279748
Latitude/Longitude: 36.40227 / -119.45608
Elevation (feet): 275

County Summary:

Tulare

Quad Summary:

Traver (3611944)

Sources:

HAL07F0002 HALSTEAD, J. ET AL (HALSTEAD ASSOCIATES) - FIELD SURVEY FORM FOR LEPIDURUS PACKARDI 2007-05-17

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 95253
EO Index: 96385
Key Quad: Ivanhoe (3611942)
Element Code: ICBRA10010
Occurrence Number: 357
Occurrence Last Updated: 2015-02-18

Scientific Name: *Lepidurus packardi*
Common Name: vernal pool tadpole shrimp

Listing Status: **Federal:** Endangered
Rare Plant Rank:
State: None
Other Lists: IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G4
State: S3S4

General Habitat:

INHABITS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER.

Micro Habitat:

POOLS COMMONLY FOUND IN GRASS-BOTTOMED SWALES OF UNPLOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED AND HIGHLY TURBID.

Last Date Observed: 2008-03-13
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-03-13
Occurrence Rank: Unknown
Owner/Manager: DFG-STONE CORRAL ER
Trend: Unknown
Presence: Presumed Extant

Location:

STONE CORRAL ECOLOGICAL RESERVE, FROM ABOUT 0.7 MILE S TO 0.75 MILE SE OF AVENUE 384 AT RD 144.

Detailed Location:

MAPPED TO COORDINATES PROVIDED FOR OCCUPIED POOLS ON SOUTH YETTEM AND ROAD 144 UNITS.

Ecological:

BRANCHINECTA LINDAHLI, TREE FROG EGG MASSES, AND WESTERN TOAD LARVAE ALSO FOUND.

Threats:

General:

DETECTED IN 5 POOLS, 29 FEB-13 MAR 2008.

PLSS: T17S, R25E, Sec. 02 (M)
Accuracy: specific area
Area (acres): 35
UTM: Zone-11 N4039439 E299245
Latitude/Longitude: 36.47923 / -119.24091
Elevation (feet): 340

County Summary:

Tulare

Quad Summary:

Ivanhoe (3611942), Monson (3611943)

Sources:

TEN09D0001 TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 33009
EO Index: 4065
Key Quad: Reedley (3611954)
Element Code: IICOL48011
Occurrence Number: 68
Occurrence Last Updated: 1998-08-11

Scientific Name: *Desmocerus californicus dimorphus*
Common Name: valley elderberry longhorn beetle

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G3T2
State: S2

General Habitat:

OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).

Micro Habitat:

PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Last Date Observed: 1991-05-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1991-05-01
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

KINGS RIVER (WEST BANK), ALONG KINGS RIVER ROAD, JUST NORTH OF DINUBA AVENUE, ABOUT 1 MILE WEST OF REEDLEY.

Detailed Location:

REPORT ON: TAXONOMY; DISTRIBUTION; LIFE HISTORY; HABITAT; FIELD TECHNIQUES & OBSERVATIONS; BEETLE RECOVERY.

Ecological:

HABITAT CONSISTS OF OPEN RIPARIAN WOODLAND, WITH ELDERBERRIES SCATTERED BETWEEN ROAD AND RIVER (ROAD IS LOCATED ON THE BLUFF ABOVE THE RIVER).

Threats:

General:

ONLY ONE CLUMP (TREE) WITH EXIT HOLES, AND THESE HAD BEEN ENLARGED, PROBABLY BY BIRDS. MANY OTHER CLUMPS WITHOUT HOLES.

PLSS: T15S, R23E, Sec. 28, SE (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4052375 E279084
Latitude/Longitude: 36.59131 / -119.46949
Elevation (feet): 340

County Summary:

Fresno

Quad Summary:

Reedley (3611954)

Sources:

BAR91F0017 BARR, C.B. (U.S. FISH AND WILDLIFE SERVICE) - FIELD SURVEY FORM FOR DESMOCERUS CALIFORNICUS DIMORPHUS 1991-05-01

BAR91R0001 BARR, C.B. (U.S. FISH AND WILDLIFE SERVICE) - THE DISTRIBUTION, HABITAT, AND STATUS OF THE VALLEY ELDERBERRY LONGHORN BEETLE (DESMOCERUS CALIFORNICUS DIMORPHUS). 1991-11-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 22865
EO Index: 21673
Key Quad: Reedley (3611954)
Element Code: PDAST7P030
Occurrence Number: 13
Occurrence Last Updated: 2017-03-30

Scientific Name: *Pseudobahia peirsonii*
Common Name: San Joaquin adobe sunburst

Listing Status: **Federal:** Threatened
State: Endangered
Rare Plant Rank: 1B.1
Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro Habitat:
GRASSY VALLEY FLOORS AND ROLLING FOOTHILLS IN HEAVY CLAY SOIL. 115-795 M.

Last Date Observed: 1927-04-11
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1990-04-08
Occurrence Rank: None
Owner/Manager: PVT
Trend: Unknown
Presence: Extirpated

Location:
DINUBA.

Detailed Location:
STEBBINS NOTES THAT THE MOST LIKELY SITE OF THIS COLLECTION WAS ~0.5 MILES SE OF DINUBA.

Ecological:

Threats:
IRRIGATED AGRICULTURAL LANDS AND HOUSES COMPLETELY DOMINATE THE REGION.

General:
ONLY SOURCE OF LOCATION INFORMATION IS A 1927 BEVANS COLLECTION. 1990 RECONNAISSANCE LEVEL SURVEYS BY STEBBINS INDICATE THAT POPULATION IS LIKELY EXTIRPATED DUE TO CONVERSION OF LAND TO AGRICULTURE.

PLSS: T16S, R24E, Sec. 17 (M)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N4045661 E285688
Latitude/Longitude: 36.53234 / -119.39386
Elevation (feet):

County Summary:	Quad Summary:
Tulare	Reedley (3611954)

Sources:

BEV27S0001	BEVANS, A. - BEVANS SN CAS #145590 1927-04-11
STE89U0001	STEBBINS, J. - TULARE PSEUDOBAHIA SPECIES MANAGEMENT PLAN (PSEUDOBAHIA PEIRSONII). 1989-01-31
STE91U0001	STEBBINS, J. - STATUS SURVEY OF TWO PLANTS ENDEMIC TO THE SAN JOAQUIN VALLEY, PSEUDOBAHIA BAHIIFOLIA & PSEUDOBAHIA PEIRSONII 1991-01-31
VOL10R0001	VOLLMAR CONSULTING - PSEUDOBAHIA BAHIIFOLIA AND PSEUDOBAHIA PEIRSONII 2010 STATUS SURVEY REPORT, EASTERN SAN JOAQUIN VALLEY, CALIFORNIA 2010-11-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 37160
EO Index: 32157
Key Quad: Orange Cove South (3611953)
Element Code: PDAST7P030
Occurrence Number: 42
Occurrence Last Updated: 2011-05-04

Scientific Name: *Pseudobahia peirsonii*
Common Name: San Joaquin adobe sunburst

Listing Status: **Federal:** Threatened
State: Endangered
Rare Plant Rank: 1B.1
Other Lists: SB_RSABG-Rancho Santa Ana Botanic Garden

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VALLEY AND FOOTHILL GRASSLAND, CISMONTANE WOODLAND.

Micro Habitat:
GRASSY VALLEY FLOORS AND ROLLING FOOTHILLS IN HEAVY CLAY SOIL. 115-795 M.

Last Date Observed: 1992-04-03
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1992-04-03
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
0.3 MILE SOUTH OF AVE 460 (SAND CREEK DRIVE), JUST EAST OF ROAD 136.

Detailed Location:
35 YARDS EAST OF FENCE.

Ecological:
ASSOCIATED WITH BRASSICA KABER, ERODIUM CICUTARIUM, PLANTAGO ERECTA, & ACHYRACHAENA. ON CIBO CLAY; VERNAL POOLS IN SURROUNDING AREA.

Threats:
OVERGRAZING THREATENS.

General:
APPROX. 100 PLANTS IN 1992. SITE WAS NOT ACCESSIBLE IN 2010.

PLSS: T15S, R25E, Sec. 16, SW (M)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N4055134 E297259
Latitude/Longitude: 36.62020 / -119.26720
Elevation (feet): 485

County Summary:
Tulare

Quad Summary:
Orange Cove South (3611953)

Sources:

VOL10R0001	VOLLMAR CONSULTING - PSEUDOBAHIA BAHIIFOLIA AND PSEUDOBAHIA PEIRSONII 2010 STATUS SURVEY REPORT, EASTERN SAN JOAQUIN VALLEY, CALIFORNIA 2010-11-XX
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15561	**EO Index:**	18740
Key Quad:	Monson (3611943)	**Element Code:**	PDEUP0D150
Occurrence Number:	12	**Occurrence Last Updated:**	2013-05-24

Scientific Name: *Euphorbia hooveri* **Common Name:** Hoover's spurge

Listing Status: **Federal:** Threatened **Rare Plant Rank:** 1B.2

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

VERNAL POOLS.

Micro Habitat:

VERNAL POOLS ON VOLCANIC MUDFLOW OR CLAY SUBSTRATE. 25-130 M.

Last Date Observed:	1941-07-26	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2010-08-05	**Occurrence Rank:**	None
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Extirpated		

Location:

DRIED-UP "HOG WALLOW" ALONG DINUBA BLVD, 8 MILES NORTH OF VISALIA CITY LIMITS.

Detailed Location:

MAPPED ALONG DINUBA BLVD AT MILEAGE GIVEN; EXACT LOCATION UNKNOWN.

Ecological:

VERNAL POOL.

Threats:

ENTIRE AREA NOW ORCHARDS OR HOMES.

General:

OCCURRENCE IS BASED ON A 1941 BACIGALUPI COLLECTION. NO PLANTS SEEN IN 1986 OR 2011; HABITAT ELIMINATED, SITE EXTIRPATED.

PLSS:	T17S, R25E, Sec. 17, W (M)	**Accuracy:**	nonspecific area	**Area (acres):**	111
UTM:	Zone-11 N4035723 E294259	**Latitude/Longitude:**	36.44470 / -119.29555	**Elevation (feet):**	327

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

BAC41S0001	BACIGALUPI, R., ET AL. - BACIGALUPI #2500 POM #266149, UC #676710, UCR #51836, CAS #318208, DS #288457, GH #347538 1941-07-26
BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
HUB86U0012	HUBBARD, T. - ELEMENT OCCURRENCE EVALUATION FORM FOR CHAMAESYCE HOOVERI 1986-06-24
HUB87U0001	HUBBARD, T. - ELEMENT CONSERVATION PLAN 1987-01-XX
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	89295	**EO Index:**	2447
Key Quad:	Monson (3611943)	**Element Code:**	PDEUP0D150
Occurrence Number:	25	**Occurrence Last Updated:**	2013-05-28

Scientific Name: *Euphorbia hooveri* **Common Name:** Hoover's spurge

Listing Status: **Federal:** Threatened **Rare Plant Rank:** 1B.2

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

VERNAL POOLS.

Micro Habitat:

VERNAL POOLS ON VOLCANIC MUDFLOW OR CLAY SUBSTRATE. 25-130 M.

Last Date Observed:	2011-06-06	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-06-06	**Occurrence Rank:**	Good
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Stable
Presence:	Presumed Extant		

Location:

BETWEEN 0.4 AND 1 AIR MILE SOUTHWEST OF SEQUOIA FIELD, NORTH OF VISALIA.

Detailed Location:

SITE ONCE ON PRIVATE LAND, NOW PART OF STONE CORRAL ECOLOGICAL RESERVE. 5 POLYGONS MAPPED ACCORDING TO A 1997 WOODWARD-CLYDE MAP AND 2009 & 2012 DIGITAL DATA FROM DFG.

Ecological:

VERNAL POOLS SURROUNDED BY ANNUAL GRASSLAND. ASSOCIATED WITH EREMOCARPUS, POLYPOGON, SIDA, HORDEUM GENICULATUM, ERYNGIUM SPINOSEPALUM, DISTICHLIS SPICATA, LILAEA SCILLOIDES, HEMIZONIA PUNGENS, AND ANTHOXANTHUM ODORATUM.

Threats:

CATTLE GRAZING IN WINTER PASTURE AND POTENTIAL CONVERSION TO IRRIGATED AGRICULTURE (1986, 1992).

General:

2 SE POLYS: >10,000 PLANTS IN 1986, SEVERAL THOUSAND IN 1992, HABITAT PRESENT BUT NO PLANTS FOUND IN 2010 & 2011. 3 NW POLYS: 50 PLANTS IN 1992, UNK # IN 1997, HUNDREDS IN 2005, 1 PLANT IN 2010, 50 PLANTS IN 2011. INCLUDES FORMER EO #31.

PLSS:	T17S, R25E, Sec. 19, W (M)	**Accuracy:**	specific area	**Area (acres):**	21
UTM:	Zone-11 N4034835 E292842	**Latitude/Longitude:**	36.43640 / -119.31111	**Elevation (feet):**	315

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

BIO88R0001	BIOSYSTEMS ANALYSIS, INC. - STATUS SURVEY OF THE GRASS TRIBE ORCUTTIEAE AND CHAMAESYCE HOOVERI IN THE CENTRAL VALLEY OF CALIFORNIA 1988-09-XX
DFG12U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - LANDS UNIT - EXCEL TABLE OF RARE SPECIES OBSERVED ON CALIFORNIA DEPARTMENT OF FISH AND GAME PROPERTIES 2012-XX-XX
STO86S0085	STONE, R. - STONE #697 JEPS #83931 SD #131831 1986-06-05
TEN09D0001	TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02
YOR97F0002	YORK, D. ET AL. - FIELD SURVEY FORM FOR CHAMAESYCE HOOVERI & ORCUTTIA INAEQUALIS 1997-06-19
YOR97S0002	YORK, D. - YORK #1886 JEPS #96216 RSA #602251 1997-06-19

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 37051
EO Index: 32048
Key Quad: Monson (3611943)
Element Code: PDEUP0D150
Occurrence Number: 32
Occurrence Last Updated: 2013-05-29

Scientific Name: *Euphorbia hooveri*
Common Name: Hoover's spurge

Listing Status: **Federal:** Threatened
Rare Plant Rank: 1B.2
State: None
Other Lists:

CNDDB Element Ranks: **Global:** G1
State: S1

General Habitat:
VERNAL POOLS.

Micro Habitat:
VERNAL POOLS ON VOLCANIC MUDFLOW OR CLAY SUBSTRATE. 25-130 M.

Last Date Observed: 2010-08-05
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2010-08-05
Occurrence Rank: Fair
Owner/Manager: DFG-STONE CORRAL ER
Trend: Unknown
Presence: Presumed Extant

Location:
AIR CHIEF UNIT OF DFG STONE CORRAL ECOLOGICAL RESERVE, ABOUT 1.2 AIR MILES NNW OF TAURUSA SCHOOL.

Detailed Location:
2 POLYGONS MAPPED IN THE SW 1/4 OF SE 1/4 OF SECTION 16 ACCORDING TO 2013 WITHAM DIGITAL DATA.

Ecological:
POOLS WITH ERYNGIUM, XANTHIUM SPINOSUM, EREMOCARPUS, TRICHOSTEMMA, CRYPSIS, MARSILEA, & PSILOCARPHUS.

Threats:
THREATENED BY LAND CONVERSION, EXCESS IRRIGATION RUNOFF, AND UNDERGRAZING.

General:
MORE THAN 800 PLANTS SEEN IN 3 POOLS IN 1992. 25 PLANTS SEEN IN WESTERN POLYGON AND 1000 PLANTS SEEN IN EASTERN POLYGON IN 2010.

PLSS: T17S, R25E, Sec. 16, SE (M)
Accuracy: specific area
Area (acres): 2
UTM: Zone-11 N4035715 E296881
Latitude/Longitude: 36.44518 / -119.26630
Elevation (feet): 335

County Summary:	Quad Summary:
Tulare	Monson (3611943)

Sources:

WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25
WOO92R0001	WOODWARD-CLYDE CONSULTANTS - FOCUSED BIOLOGICAL SURVEYS FOR 8 TARGET SPECIES IN TULARE COUNTY (APPENDICES) 1992-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	40390	**EO Index:**	35397
Key Quad:	Monson (3611943)	**Element Code:**	PMPOA4G060
Occurrence Number:	56	**Occurrence Last Updated:**	2013-05-15

Scientific Name: *Orcuttia inaequalis* **Common Name:** San Joaquin Valley Orcutt grass

Listing Status: **Federal:** Threatened **Rare Plant Rank:** 1B.1

State: Endangered **Other Lists:**

CNDDB Element Ranks: **Global:** G1

State: S1

General Habitat:

VERNAL POOLS.

Micro Habitat:

10-755 M.

Last Date Observed:	2011-06-06	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-06-06	**Occurrence Rank:**	Fair
Owner/Manager:	DFG-STONE CORRAL ER	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

SSE OF SEQUOIA FIELD (AIRPORT), ABOUT 0.6 MI NORTH OF 12TH AVE AND 1 MI EAST OF DINUBA BLVD (HWY 63), NORTH OF VISALIA.

Detailed Location:

STONE CORRAL ECOLOGICAL RESERVE. MAPPED WITHIN THE SW 1/4 OF THE NW 1/4 SECTION 19 ACCORDING TO 2013 WITHAM DIGITAL DATA.

Ecological:

VERNAL POOL WITH CHAMAESYCE HOOVERI, CRYPSIS, DISTICHLIS SPICATA, DOWNINGIA CUSPIDATA, HORDEUM DEPRESSUM, LILAEA SCILLOIDES, AND POLYPOGON MONSPELIENSIS. ADJACENT UPLAND DOMINATED BY ANNUAL GRASSES; POOL IS MOSTLY FREE OF EXOTIC PLANTS.

Threats:

General:

250 PLANTS SEEN IN 1997, NONE SEEN IN 2005, FEWER THAN 100 PLANTS SEEN IN 2006, NONE SEEN IN 2009 & 2010, ~1,000 PLANTS SEEN IN 2011. LONG-TERM VIABILITY QUESTIONED DUE TO SMALL SIZE OF PRESERVE.

PLSS:	T17S, R25E, Sec. 19, NW (M)	**Accuracy:**	specific area	**Area (acres):**	1
UTM:	Zone-11 N4034940 E292741	**Latitude/Longitude:**	36.43732 / -119.31225	**Elevation (feet):**	315

County Summary:	**Quad Summary:**
Tulare	Monson (3611943)

Sources:

DFG12U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - LANDS UNIT - EXCEL TABLE OF RARE SPECIES OBSERVED ON CALIFORNIA DEPARTMENT OF FISH AND GAME PROPERTIES 2012-XX-XX
TEN09D0001	TENNANT, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - SPECIAL STATUS SPECIES DATA FOR 2008 FROM DFG CENTRAL REGION LANDS UNITS 2009-08-19
WIT13R0001	WITHAM, C. - STATUS SURVEYS FOR SEVEN FEDERALLY LISTED VERNAL POOL GRASSES AND CHAMAESYCE HOOVERI IN THE SACRAMENTO AND SAN JOAQUIN VALLEYS (GREAT VALLEY), CALIFORNIA, USA 2013-03-25
YOR97F0002	YORK, D. ET AL. - FIELD SURVEY FORM FOR CHAMAESYCE HOOVERI & ORCUTTIA INAEQUALIS 1997-06-19
YOR97S0001	YORK, D. - YORK #1887 JEPS #96217, RSA #602341 1997-06-19

BIOLOGICIAL EVALUATION

LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

TRAVER COMMUNITY PLAN UPDATE
BIOLOGICAL EVALUATION
TULARE COUNTY, CALIFORNIA

Prepared by:

LIVE OAK ASSOCIATES, INC.

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June 30, 2014 PN 1840-01

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of the Traver Community Plan Proposed Planning Study Area (PPSA) in the unincorporated community of Traver in Tulare County, California and evaluated likely impacts to such resources resulting from development of the PPSA. The approximately 383-acre PPSA consists of three separate blocks of land both east and west of State Highway 99. In April and June 2014, LOA surveyed the PPSA for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

Habitats/land uses identified within the PPSA included orchards, agricultural fields, industrial/residential lands, ruderal areas, and a segment of Banks Ditch and the Traver Canal. A mosaic of agricultural, industrial, and residential/commercial land uses surround the PPSA, within a region dominated by similar land uses.

Impacts associated with future development of PPSA would be less than significant, as defined by the California Environmental Quality Act (CEQA), for special status plant species, wildlife movement corridors, downstream water quality, and sensitive habitats. Loss of habitat for special status animal species would also be considered less than significant under CEQA.

Potentially significant impacts associated with future development of the PPSA include construction mortality of the valley elderberry longhorn beetle (VELB), Swainson's hawk, San Joaquin kit fox, burrowing owl, loggerhead shrike, pallid bat, and western mastiff bat; nesting raptors and migratory birds protected under the federal Migratory Bird Treaty Act and related state laws; and colonially roosting bats. Project avoidance of active nests, dens, and roost sites identified during preconstruction surveys, compensation for the removal of any blue elderberry shrubs, and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will ensure that impacts to all special status animal species are reduced to a less than significant level.

Project impacts will also potentially be significant for waters of the U.S., which in the PPSA consists of approximately 3,400 linear feet of Banks Ditch and 2,235 linear feet of Traver Canal. Impacts to Banks Ditch and the Traver Canal can be mitigated through on-site or off site preservation or creation, through payment into an in-lieu fee program (if one is available), purchase of credits from an approved Mitigation Bank in the vicinity, or some combination of one or more of these options.

TABLE OF CONTENTS

1.0 INTRODUCTION

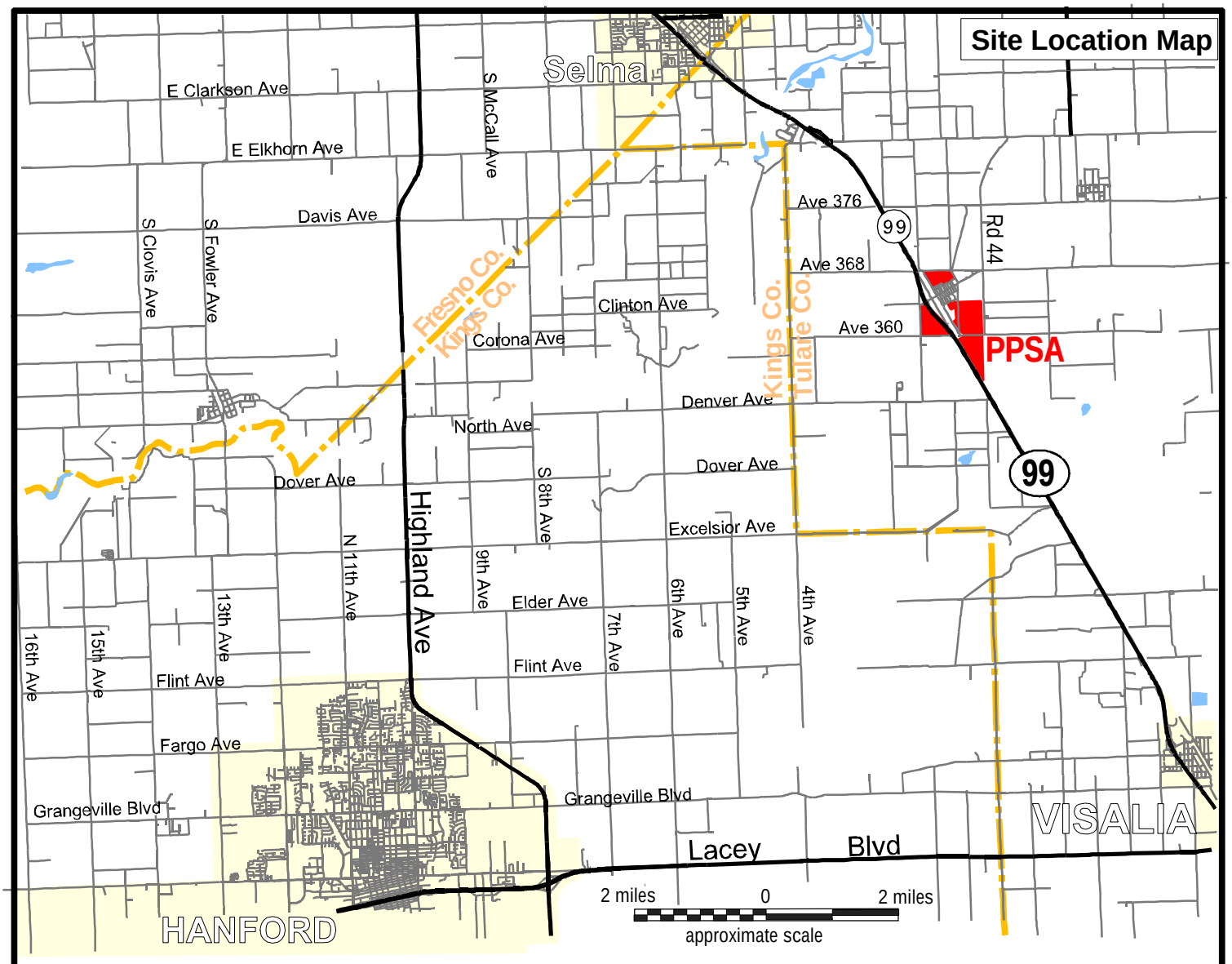
The technical report that follows describes the biotic resources of approximately 383 acres of lands (hereafter referred to as Proposed Planning Study Area or PPSA) proposed for addition to the Traver Community Plan area. The PPSA consists of three disjunct areas west, east, and north of the unincorporated community of Traver in Tulare County, California (Figure 1). The westernmost area is bounded by Road 36 on the west and State Highway 99 on the east, and comprises approximately 92 acres. The easternmost area is bounded by Highway 99 on the west and Road 44 on the east, and comprises approximately 238 acres. The northernmost area is bounded by Avenue 368 on the north, Canal Drive to the east, and Jacobs Drive to the southeast, and comprises approximately 53 acres. The site may be found on the *Traver* U.S. Geological Survey (USGS) 7.5-minute quadrangle in Sections 16 and 21 of Township 17 South, Range 23 East, Mt. Diablo Base and Meridian (Figure 2).

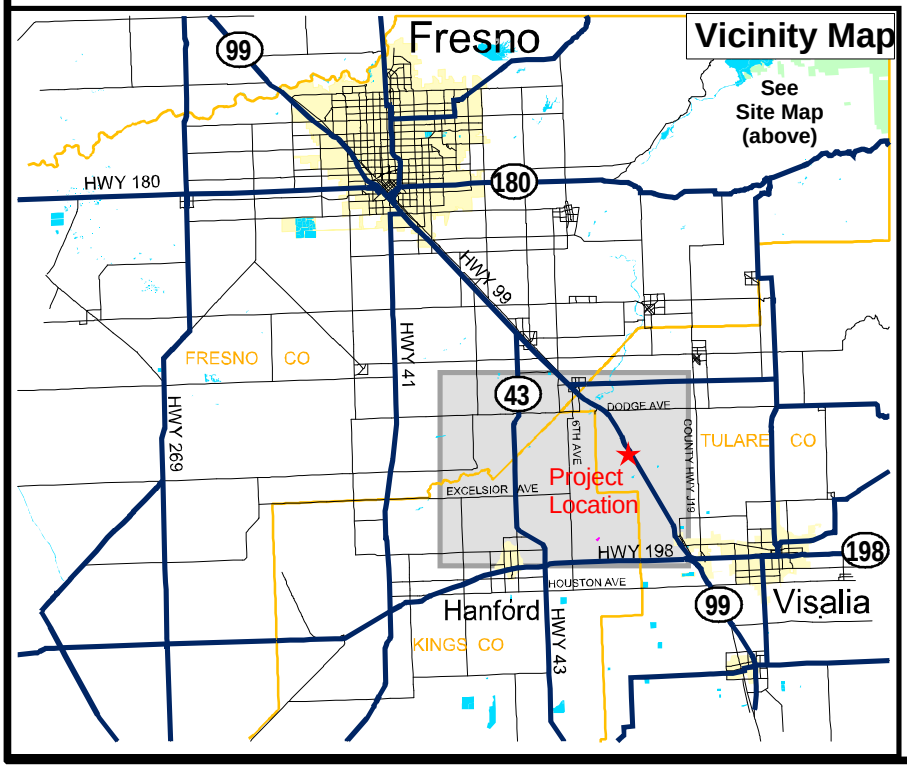
1.1 PROJECT DESCRIPTION

The County of Tulare proposes to update the Traver Community Plan with the addition of the 383-acre PPSA to the plan area, following which the PPSA may be developed under a number of individual projects.

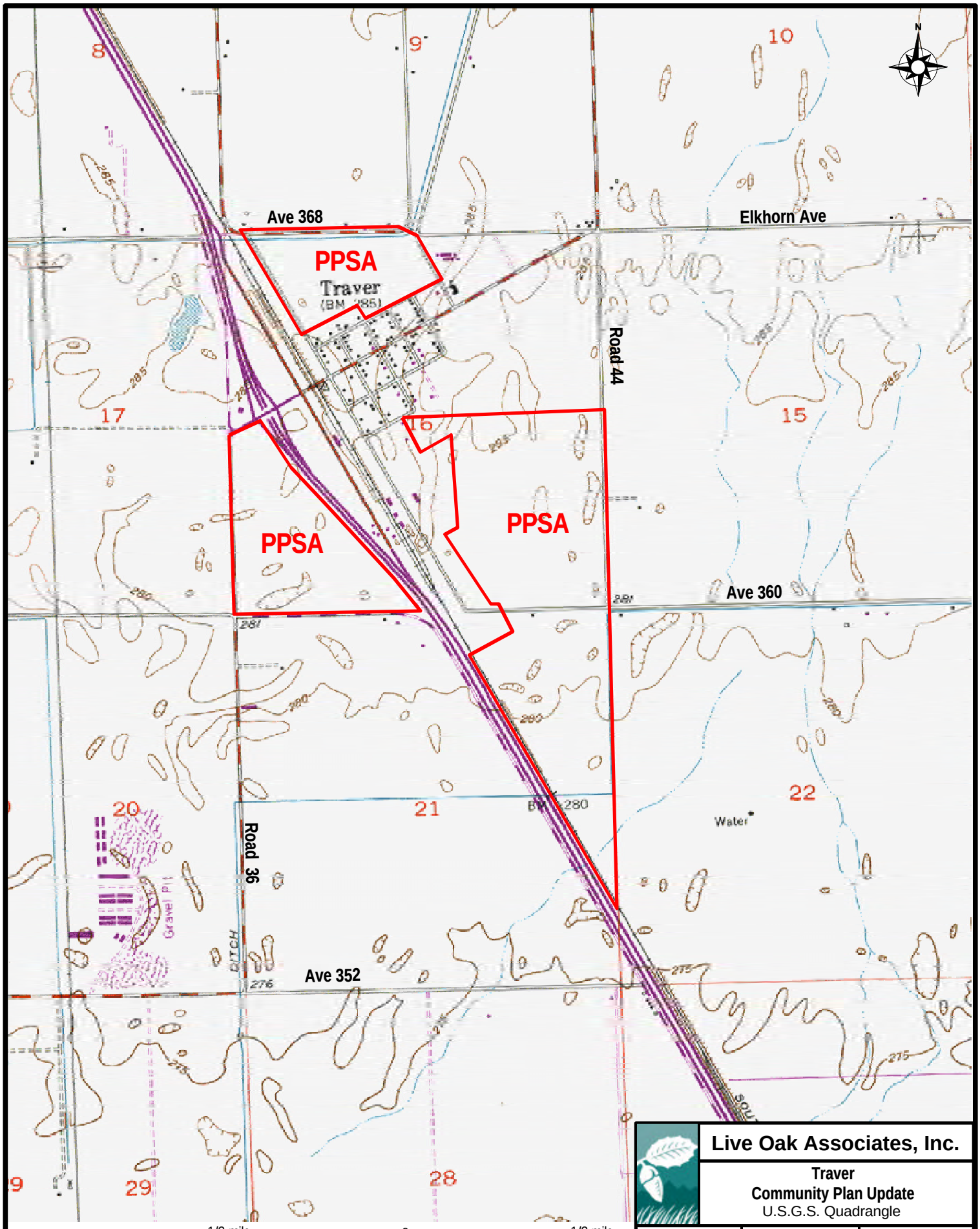
1.2 REPORT OBJECTIVES

The development of agriculture and other open space parcels may damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by policies and ordinances of Tulare County. This report addresses issues related to: 1) sensitive biotic resources occurring within the PPSA; 2) the federal, state, and local laws regulating such resources, and 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. As such, the objectives of this report are to:





Live Oak Associates, Inc.		
Traver **Community Plan Update** Vicinity Map		
Date **4/24/2014**	Project # **1840-01**	Figure # **1**



From USGS
Traver 7.5' Quadrangle 1969

1/2 mile 0 1/2 mile
approximate scale

Live Oak Associates, Inc.

Traver
Community Plan Update
U.S.G.S. Quadrangle

Date	Project #	Figure #
4/24/2014	1840-01	2

- Summarize all site-specific information related to existing biological resources;
- Make reasonable inferences about the biological resources that could occur within the PPSA based on habitat suitability and the proximity of the PPSA to a species' known range;
- Identify and discuss project impacts to biological resources likely to occur within the PPSA within the context of CEQA or any state or federal laws; and
- Summarize all state and federal natural resource protection laws that may be relevant to future development of the PPSA;
- Identify 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 western and eastern sections of the PPSA was conducted on April 16, 2014 by LOA ecologists Rebekah Jensen and Wendy Fisher. The northern section of the PPSA was surveyed on June 26, 2014 by LOA ecologist Geoffrey Cline. The surveys consisted of driving and bicycling roads of the PPSA, conducting a meandering walk through accessible lands, and using binoculars to scan those lands for which access was not possible. During the surveys the principal land uses/habitats of the PPSA were identified and the constituent plants and animals of each land use/habitat were noted.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the PPSA. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2014), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

Detailed surveys for sensitive biological resources were not conducted for this study. Field surveys conducted for this study were sufficient to assess the significance of possible biological impacts associated with full development of the PPSA and to assess the need for more detailed studies that could be warranted if sensitive biotic resources were identified in this initial survey.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The PPSA is located in the central San Joaquin Valley east, west, and north of the community of Traver. The valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the central San Joaquin Valley (and the PPSA) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the PPSA is about 10 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the area and the project vicinity is the Kings River, which flows past the PPSA approximately three miles to the northwest. The Kings River historically contained large areas of riparian, wetland, and aquatic ecosystems that supported large populations of diverse native plants and animals. Presently, the Kings River supports only a fraction of the riparian habitat it once supported and the aquatic habitat has been greatly degraded from agricultural runoff and irregular flows. In essence the river has been reduced to a series of distributary channels supplying water to farmland in the region.

The PPSA is situated within a matrix of agricultural lands, industrial complexes, and residential/commercial development associated with the community of Traver. The westernmost block of the PPSA is bordered by industrial/ruderal land to the north, Highway 99 to the east, and orchard to the south and west. The easternmost block of the PPSA is bordered by orchard to the north and east, Highway 99 to the southwest, and orchard and industrial complexes to the west. The northernmost block of the PPSA is bordered by an orchard and vineyard to the north, agricultural land to the southwest, the community of Traver to the southeast, and Traver Elementary School to the northeast.

2.2 PROJECT SITE

The PPSA consists of orchard land, irrigated and dry-farmed agricultural fields, a railroad yard, an industrial complex, and two residential lots. The topography of the site is relatively level, with an average elevation of 285 feet National Geodetic Vertical Datum (NGVD).

Three soil mapping units within four soil series were identified within the PPSA: Calgro-Calgro saline sodic, 0-2 percent slopes, Crosscreek-Kai Association, 0-2 percent slopes, and Youd loam, 0-1 percent slopes (NRCS 2014). All three of these soil mapping units are considered hydric, defined as saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions they support hydrophytic vegetation. However, soils of the site exhibited no characteristics required by rare edaphic plant species.

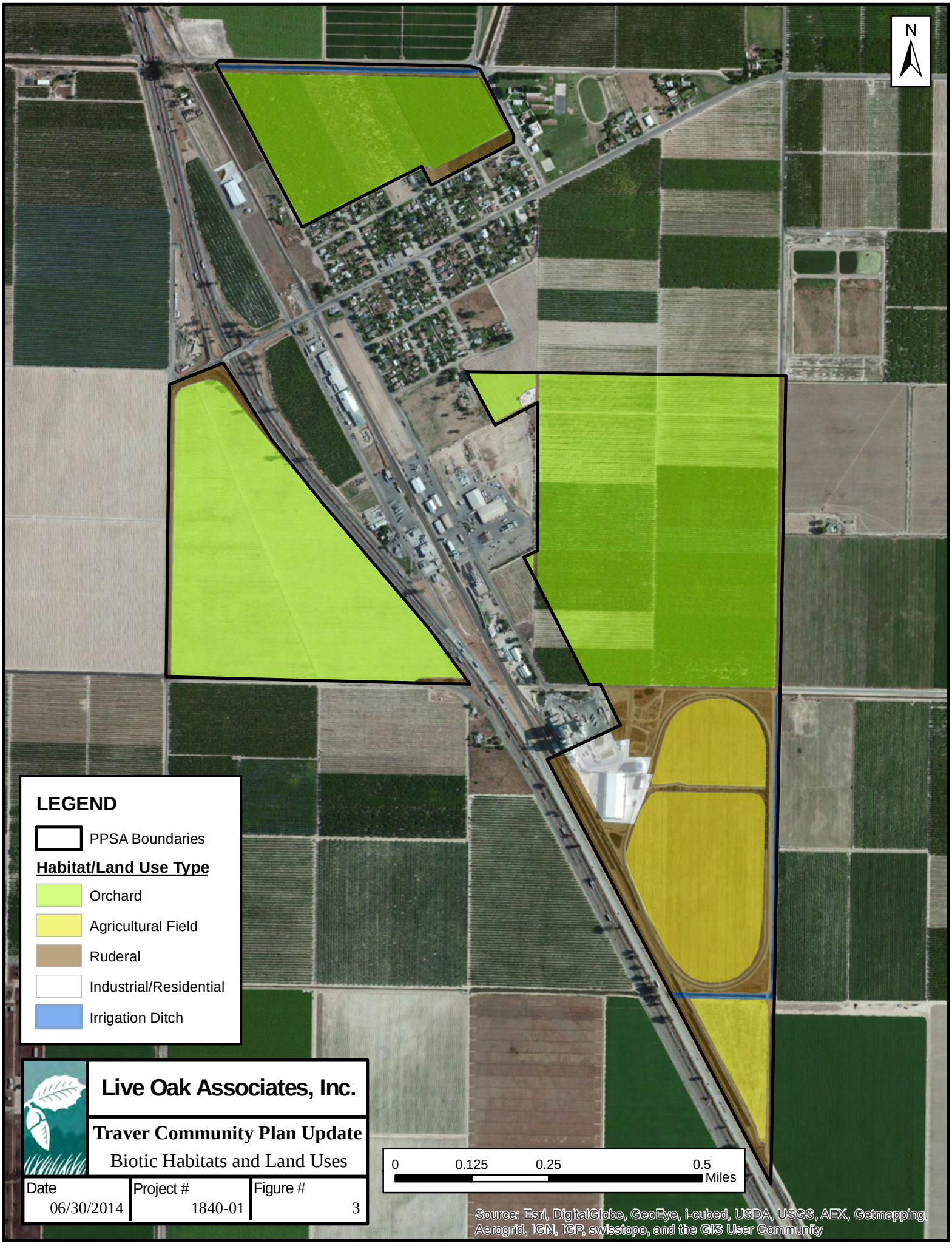
2.3 BIOTIC HABITATS/LAND USES

Five land use/habitat types were observed within the PPSA during the April and June 2014 biological field surveys: orchard, agricultural field, ruderal, industrial/residential, and irrigation ditch (Figure 3). A list of the vascular plant species observed within the PPSA and the terrestrial vertebrates using, or potentially using, the site are provided in Appendices A and B, respectively. Selected photographs of the PPSA are presented in Appendix C.

2.3.1 Orchard

Orchard comprised approximately 258 acres, or the considerable majority, of the PPSA. At the time of the April and June 2014 field surveys, orchards in the western portion of the PPSA consisted of almond (*Prunus dulcis*), while orchards in the eastern and northern portion of the PPSA consisted of nectarine (*Prunus persica* var. *nectarine*), peach (*Prunus persica*) and/or cherry (*Prunus avium*). Being highly maintained, these orchards were barren in the understory.

Due to intensive disturbance and the lack of aquatic habitat, orchards provide marginal habitat for amphibians; however, Pacific chorus frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*) may disperse through orchard lands during the winter and spring. A limited number of



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Traver Community Plan Update

Biotic Habitats and Land Uses

Date	Project #	Figure #
06/30/2014	1840-01	3

reptile species would be expected to forage in orchards of the PPSA due to the lack of sun required by these species for thermal regulation; however, the western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake (*Pituophis catenifer catenifer*), common kingsnake (*Lampropeltis getulus*), and western rattlesnake (*Crotalus viridis*) may occasionally occur.

Orchards provide foraging and nesting habitat for a number of avian species. Birds that could potentially nest in mature orchards of the PPSA and were observed during the surveys include the American robin (*Turdus migratorius*) and mourning dove (*Zenaida macroura*), both year-round residents of the Central Valley, and the western kingbird (*Tyrannus verticalis*), a summer migrant. Winter migrants such as the white-crowned sparrow (*Zonotrichia leucorphrys*) and yellow-rumped warbler (*Setophaga coronata*) would also be expected to use orchards of the PPSA for foraging and cover.

A few small mammal species would be expected to occur within the orchards of the PPSA. These include deer mice (*Peromyscus maniculatus*), California voles (*Microtus californicus*), house mice (*Mus musculus*), Botta's pocket gophers (*Thomomys bottae*), and Audubon's cottontails (Sy*lvilagus audubonii*). Various species of bat may forage over orchard habitat for flying insects.

Foraging raptors and mammalian predators may occur in orchards of the PPSA from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards. Mammalian predators potentially occurring in orchards of the PPSA would most likely be limited to raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*) and red foxes (*Vulpes vulpes*), as these species are relatively tolerant of human disturbance.

2.3.2 Agricultural Field

Agricultural field comprised much of the southeastern portion of the PPSA. A highly-maintained corn field (*Zea mayz* ssp. *mays*) of approximately 50 acres was present within the circular train tracks of the railroad yard. South of the tracks was a dry-farmed wheat field (*Triticum* sp.) of approximately 10 acres that appeared to have little, if any, ongoing

maintenance. The wheat field contained some non-native annuals, including Rancher's fireweed (*Amsinckia intermedia*) and barnyard barley (*Hordium murinum* ssp. *leporinum*).

Intensive agricultural practices on the corn field of the PPSA likely limit its value to wildlife; however, some wildlife species undoubtedly use this field. By contrast, the dry-farmed wheat field appears to have a much lower disturbance regime, and would be expected to be used by a greater complement of wildlife species. Amphibians with the potential to use either field include Pacific chorus frogs and western toads, both of which may breed in nearby temporary irrigation ditches and subsequently disperse through the fields. Reptiles that could occur in the fields include the side-blotched lizard (*Uta stansburiana*), western whiptail (*Cnemidophorus tigris*), Pacific gopher snake, and common kingsnake.

Agricultural fields also provide foraging habitat for a number of avian species. Common resident species likely to forage in the agricultural fields of the PPSA include mourning doves and American crows (*Corvus brachyrhynchos*), both of which were observed during the survey, as well as mixed flocks of Brewer's blackbirds (*Euphagus cyanocephalus*), brown-headed cowbirds (*Molothrus ater*), and European starlings (*Sturnus vulgaris*). Summer migrants that would be common on agricultural lands of the PPSA include the western kingbird, also observed during the survey, while common winter migrants include the savannah sparrow (*Passerella sandwichensis*) and American pipit (*Anthus rubescens*).

A few mammal species may also occur within the agricultural fields of the PPSA. During the field survey, numerous California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher burrows were observed in the dry-farmed wheat field, along with several individual ground squirrels. This field, with its relatively low level of disturbance, is also likely to be used by deer mice and California voles. By contrast, burrowing rodent activity in the corn field appeared limited to the field margins. Other small mammals that may occur from time to time within the agricultural fields of the PPSA include black-tailed hares (*Lepus californicus*) and Audubon's cottontails. Various species of bat may also forage over the fields of the PPSA for flying insects.

The presence of amphibians, reptiles, birds and small mammals—particularly on the dry-farmed wheat field—is likely to attract foraging raptors and mammalian predators. Raptors such as red-tailed hawks (*Buteo jamaicensis*), American kestrels (*Falco sparverius*), and various owls would likely forage over agricultural fields of the PPSA; two red-tailed hawks and a kestrel were observed during the field survey. Mammalian predators occurring in agricultural fields of the PPSA would be the same as those described for orchard habitat.

2.3.3 Ruderal

Ruderal (disturbed) areas consisted of the roads and railroad tracks of the PPSA, as well as the margins of these roads and tracks, and the barren or sparsely vegetated strips of land bordering the industrial/residential areas, irrigation ditches, and orchards. Ruderal areas contained a sparse cover of common agricultural weeds, which included common sunflower (*Helianthus annuus*), Russian thistle (*Salsola tragus*), barnyard barley, Rancher's fireweed, puncturevine (*Tribulus terrestris*), and Bermuda grass (*Cynodon dactylon*). A few individual blue gum eucalyptus (*Eucalyptus globulus*) and Washington fan palm (*Washingtonia filifera*) trees were located along the ruderal margin of Highway 99 on the eastern boundary of the western block of the PPSA. Two small-flowered tamarisk (*Tamarisk parviflora*) were located in ruderal areas along the southern boundary of the western block of the PPSA. Three elderberry shrubs (*Sambucus nigra* spp. *caerulea*) and several unidentified ornamental shrubs were located in the expanse of ruderal land northeast of the Foster Farms industrial complex.

Although the wildlife habitat value of ruderal lands within the PPSA is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for agricultural fields could potentially use ruderal habitats of the PPSA, as well. Mourning doves, northern mockingbirds (*Mimus polyglottos*), and house sparrows (*Passer domesticus*) could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground. At the time of the field survey, a pair of red-tailed hawks appeared to be nesting in one of the eucalyptus trees bordering the western block of the PPSA along the ruderal margin of Highway 99; the hawks were observed coming and going from one of the trees, and flying over adjacent lands. Swainson's hawks (*Buteo swainsoni*) also have the potential to nest in these trees, as they have been known to do in

eucalyptus elsewhere along Highway 99. The eucalyptus trees could also be used for nesting by western kingbirds or Bullock's orioles (*Icterus bullockii*). The fan palm tree in the western block of the PPSA may be used for nesting by hooded orioles (*Icterus cucullatus*) and European starlings.

Small mammals that would be expected to occur on ruderal lands of the PPSA include California ground squirrels, Botta's pocket gophers, deer mice, California voles, and house mice. Numerous California ground squirrel burrows were observed along the ruderal margins of roads, ditches, and railroad tracks, as well as in the expanse of ruderal land northeast of the Foster Farms industrial complex. Mammalian predators with the potential to occur on ruderal lands of the study area include disturbance-tolerant species such as the raccoon, red fox, and coyote.

2.3.4 Industrial/Residential

Industrial/residential areas comprised a small portion of the PPSA. A Foster Farms industrial plant was identified south of Avenue 360 and west of the railroad yard. Two small residences were observed within the northwestern portion of the PPSA. Parking areas surrounding the structures had a gravel substrate. Industrial/residential areas were barren of vegetation.

A number of wildlife species adapted to human disturbance could be expected to occur in the industrial/residential land of the PPSA. For example, amphibians such as Pacific chorus frogs and western toads might disperse through industrial/residential land during the winter and spring, and reptiles such as the western fence lizard and common garter snake (*Thamnophis sirtalis*) could forage in this land use type. Buildings and other human-made structures located within the industrial/residential land of the PPSA provide potential nesting habitat for a number of avian species such as the house finch (*Haemorhous mexicanus*), house sparrow, and Eurasian collared dove (*Streptopelia decaocto*); all were observed during the field surveys. Mammal species attracted to this land use type may include the house mouse, Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*).

Birds of prey may occasionally forage over the industrial/residential areas. The red-tailed hawk and American kestrel are likely visitors; both were observed on or near industrial/residential land of the site during the field surveys.

2.3.5 Irrigation Ditch

Two irrigation ditches ran through the PPSA and included portions of the Banks Ditch and Traver Canal. The Banks Ditch, identified as such on the USGS *Traver* quadrangle, is an earthen irrigation ditch approximately 20 feet in width passed through the eastern block of the PPSA. This feature traversed the eastern boundary of the PPSA along Road 44 from north to south, turned 90 degrees to the west between the circular train tracks on the north and dry-farmed wheat field on the south, and finally passed out of the PPSA under Highway 99. The ditch was dry during the spring field survey. Even during the peak of spring, all vegetation observed within the ditch was brown and dried, suggesting spraying with herbicide. The vegetation that was observed was dominated by bearded sprangletop (*Leptochloa fusca* ssp. *fascicularis*), with sparse Bermuda grass, tall flatsedge (*Cyperus eragrostis*), and Russian thistle.

The Traver Canal is an earthen irrigation ditch approximately 20 feet in width located along the northern boundary of the northern portion of the PPSA and the south side of Avenue 368. During the surveys this ditch was also dry and was dominated by the same vegetation as the Banks Ditch.

Due to the lack of vegetation in the irrigation ditches, this habitat would be of limited value to native wildlife. However, the introduced bullfrog (*Lithobates catesbeianus*) and mosquitofish (*Gambusia affinis*) may occur in the ditches during periods of inundation; these and other prey species may attract wading birds such as the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*). Cliff swallow (*Petrochelidon pyrrhonota*) could potentially nest in the culverts at Road 44's crossing of the Banks Ditch or the Canal Drive or Burke Drive crossing of the Traver Canal; however, no swallow nests were observed at the time of the field survey.

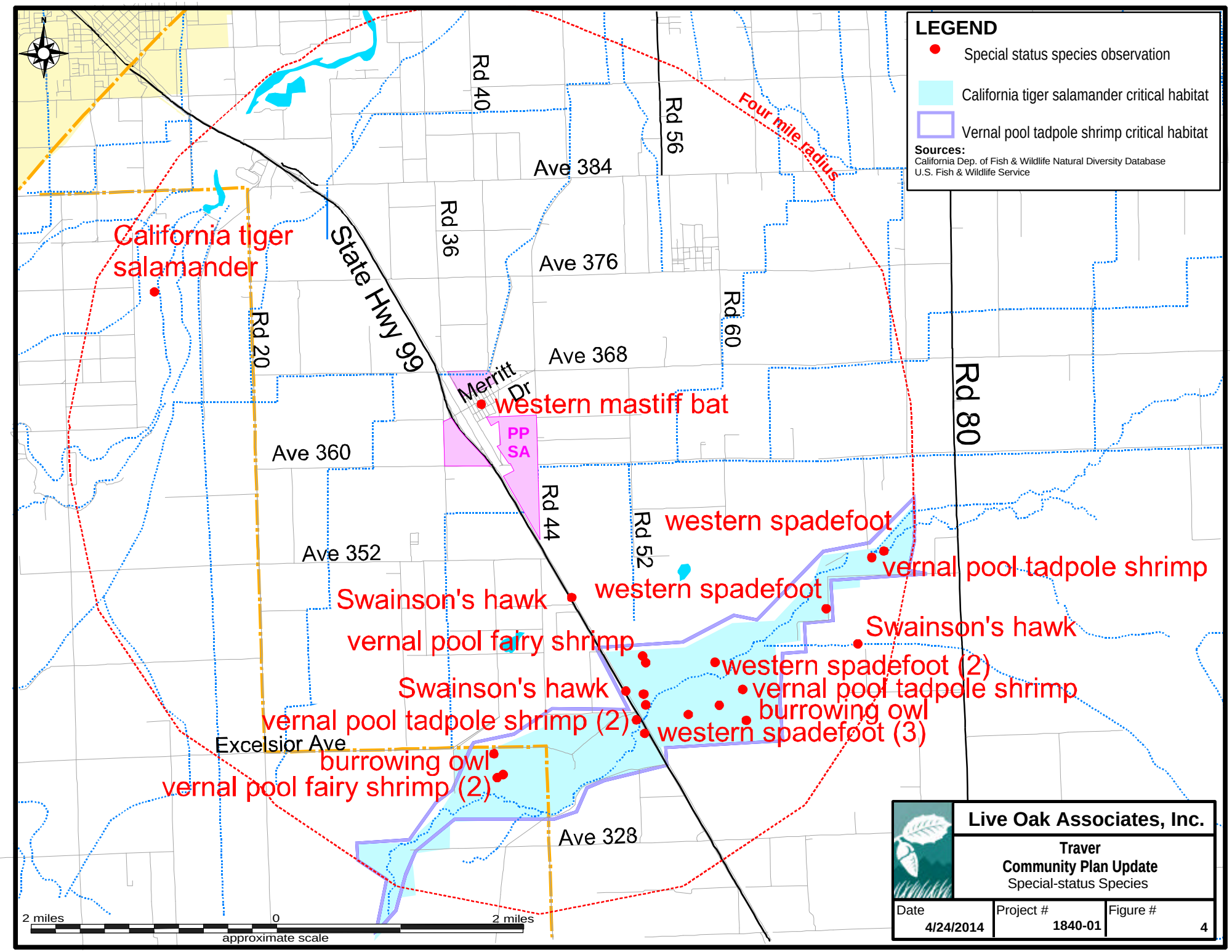
2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (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 the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."

A number of special status plants and animals occur in the vicinity of the PPSA (Figures 4 and 5). These species, and their potential to occur within the PPSA, are listed in Table 1 in the following pages. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *California Natural Diversity Data Base* (CDFW 2014), *Endangered and Threatened Wildlife and Plants* (USFWS 2014), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2014). It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known literature records.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Traver* USGS 7.5-minute quadrangle in which the project site occurs, and for the eight surrounding quadrangles (*Burris Park, Selma, Reedley, Orange Cove South, Monson, Visalia, Goshen,* and *Remnoy*) using the CNDDB Rarefind 5 (2014) program.


LEGEND
Special status species observation
California tiger salamander critical habitat
Vernal pool tadpole shrimp critical habitat
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service
Four mile radius
Rd 40
Rd 56
Ave 384
Rd 36
Ave 376
Rd 60
Rd 20
State Hwy 99
Ave 368
Merritt Dr
Rd 80
western mastiff bat
PP
SA
Ave 360
Rd 44
Rd 52
western spadefoot
Ave 352
vernal pool tadpole shrimp
Swainson's hawk
western spadefoot
vernal pool fairy shrimp
Swainson's hawk
western spadefoot (2)
Swainson's hawk
vernal pool tadpole shrimp
burrowing owl
vernal pool tadpole shrimp (2)
western spadefoot (3)
Excelsior Ave
burrowing owl
vernal pool fairy shrimp (2)
Ave 328
California tiger salamander
2 miles
0
2 miles
approximate scale
Live Oak Associates, Inc.
Traver
Community Plan Update
Special-status Species
Date
4/24/2014
Project #
1840-01
Figure #
4

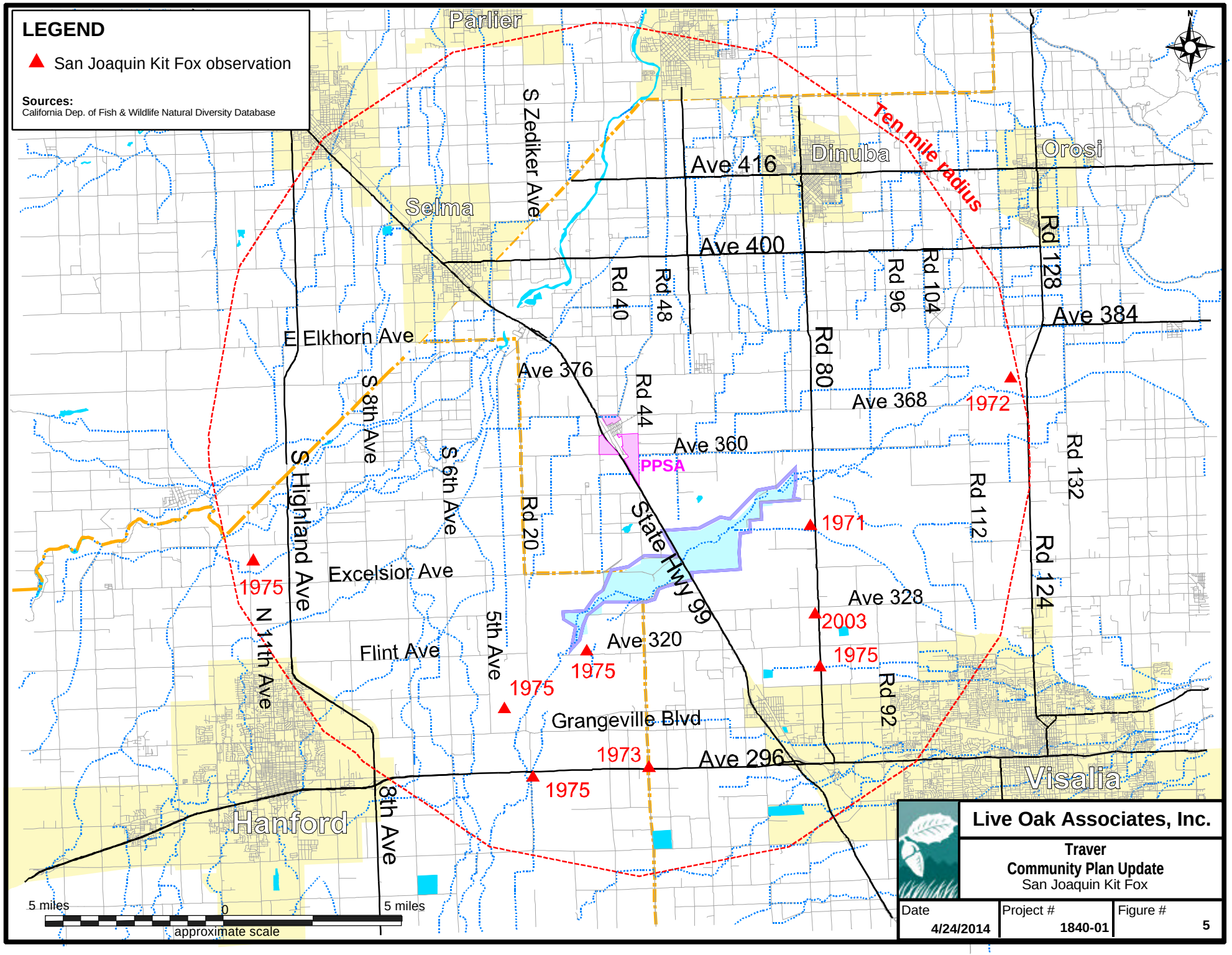

LEGEND
San Joaquin Kit Fox observation
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
Parlier
Selma
Dinuba
Orosi
Visalia
Hanford
Ten mile radius
S Zediker Ave
Ave 416
Ave 400
Ave 384
Ave 376
Ave 368
Ave 360
Ave 328
Ave 320
Ave 296
Rd 40
Rd 48
Rd 96
Rd 104
Rd 128
Rd 80
Rd 44
Rd 20
Rd 112
Rd 132
Rd 124
Rd 92
E Elkhorn Ave
S 8th Ave
S 6th Ave
S Highland Ave
N 11th Ave
Excelsior Ave
Flint Ave
5th Ave
8th Ave
State Hwy 99
Grangeville Blvd
PPSA
1972
1971
1975
2003
1973
5 miles
0
5 miles
approximate scale
Live Oak Associates, Inc.
Traver
Community Plan Update
San Joaquin Kit Fox
Date
4/24/2014
Project #
1840-01
Figure #
5

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

PLANTS (adapted from CDFW 2014 and CNPS 2014)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the PPSA
Hoover's Spurge (*Chamaesyce hooveri*)	FT, CNPS 1B	This annual occurs in vernal pools of California's Central Valley; blooms July-September; elevation 80-820 ft.	**Absent.** Vernal pools are absent from the PPSA.
San Joaquin Valley Orcutt Grass (*Orcuttia inaequalis*)	FE, CE CNPS 1B	This annual occurs in vernal pools of the Central Valley; requires deep pools with prolonged periods of inundation; blooms April-September; elevation 100-2,480 ft.	**Absent.** Vernal pools are absent from the PPSA.
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE CNPS 1B	This annual sunflower occurs in grasslands of the Sierra Nevada foothills in heavy clay soils of the Porterville and Centerville series. Blooms March-April; elevation 300-2,625 ft.	**Absent.** Suitable heavy clay soils of the Porterville and Centerville series are absent from the PPSA.

CNPS-Listed Plants

Heartscale (*Atriplex cordulata* var. *cordulata*)	CNPS 1B	Occurs on saline or alkaline soils in chenopod scrub, meadows, seeps, and grasslands; blooms April-October; elevations below 1,230 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Earlimart Orache (*Atriplex cordulata* var. *erecticaulis*)	CNPS 1B	Occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Brittlescale (*Atriplex depressa*)	CNPS 1B	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley; blooms April-October; elevations below 1,050 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Lesser saltscale (*Atriplex minuscula*)	CNPS 1B	Occurs widely scattered locations of California's Central Valley with sandy alkaline soils in chenopod scrub, valley grasslands, and vernal pools; blooms May-October; elevation 50-660 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Subtle Orache (*Atriplex subtilis*)	CNPS 1B	Occurs in valley and foothill grassland; blooms August-October; elevation 130-330 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Recurved Larkspur (*Delphinium recurvatum*)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.
Spiny-Sepaled Button Celery (*Eryngium spinoseplaum*)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	**Absent.** Historic and ongoing human disturbance of the PPSA has rendered habitats unsuitable for this species.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

ANIMALS (adapted from CDFW 2014)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence within the PPSA
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Habitat suitable for this species is absent from the project site.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Primarily found in vernal pools, but may use other seasonal wetlands in mesic valley and foothill grasslands.	**Absent.** Habitat suitable for this species is absent from the project site.
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills.	**Possible.** Three elderberry shrubs are located on the eastern block of the PPSA, within ruderal land bordering an industrial complex and railroad yard and one elderberry shrub is located adjacent to the northwest border of the northern section PPSA. Due to the isolation of these shrubs from other elderberry shrubs and the extremely marginal nature of surrounding habitats, VELB occupation of the PPSA is a remote possibility at best.
California Tiger Salamander (*Ambystoma californiense*)	FT, CT	Found primarily in annual grasslands; requires vernal pools for breeding and rodent burrows for aestivation. Although most CTS aestivate within 0.4 mile of their breeding pond, outliers may aestivate up to 1.3 miles away (Orloff 2011).	**Absent.** Habitat suitable for breeding is absent from the PPSA and surrounding lands within approx.. 1.5 miles. Rodent burrows in the PPSA are situated in habitat that would be considered marginal to unsuitable for CTS aestivation, restricted as they are to a dry-farmed wheat field, and the ruderal margins of roads, industrial areas, and the irrigation ditch. Moreover, these burrows are too remote from potential breeding habitat to be used by CTS for aestivation.
Swainson's Hawk (*Buteo swainsoni*)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Likely.** Swainson's hawks could nest in the eucalyptus trees along Highway 99 that borders sections of the PPSA. Hawks could forage over the small dry-farmed wheat field located at the southern extent of the easternmost block of the PPSA, where burrowing rodent activity was abundant, and over the corn field after harvest
San Joaquin Kit Fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (6 to 10 inches in diameter) ground squirrel burrows as denning habitat.	**Unlikely.** Intensive agricultural practices, highly modified habitats, and ongoing disturbance make kit fox habitation of the PPSA unlikely. Individuals may occasionally disperse or pass through the site, however. There have been 9 documented SJKF occurrences within 10 miles of the PPSA, eight of which date back to the 1970's.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

ANIMALS – cont'd.

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the PPSA
Western Spadefoot (*Spea hammondii*)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	**Absent.** Habitat suitable for breeding is absent from the PPSA and surrounding lands within approximately 1.5 miles. Rodent burrows within the PPSA are located within marginal habitats too remote from potential breeding habitat to be used for aestivation by spadefoot.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	**Possible.** This species may forage within and adjacent to the PPSA, but breeding habitat is absent from the site.
White-tailed Kite (*Elanus leucurus*)	CFP	Occurs in savannah, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	**Possible.** White-tailed kites do not generally nest along roads or in urban areas (Erichsen 1995), making it unlikely that individuals of this species would use trees on or adjacent to the PPSA. However, kites could forage over the small dry-farmed wheat field located at the southern extent of the easternmost block of the PPSA, where burrowing rodent activity was abundant.
Western Pond Turtle (*Actinemys marmorata*)	CSC	Occurs in open slow-moving water or ponds with rocks and logs for basking. Nesting occurs in open areas, on a variety of soil types, and up to ¼ mile away from water. This species is almost extinct in the southern San Joaquin Valley.	**Unlikely.** The irrigation ditches of the PPSA are unsuitable for western pond turtles due to lack of basking structures and intermittent flow. Moreover, the closest documented occurrence of pond turtle was recorded over 10 miles from the PPSA in 1879.
Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Possible.** Suitably-sized burrows on the PPSA are restricted to the dry-farmed wheat field and the ruderal margins of roads, industrial areas, and the irrigation ditches; all but the small wheat field would be considered marginal for burrowing owl due to high levels of human disturbance. However, it is remotely possible that owls could roost or nest in burrows of the PPSA and forage in on-site agricultural fields.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Can often be found in cropland.	**Possible.** Marginal nesting habitat for shrikes is available in trees of the PPSA, and shrikes could forage in on-site agricultural fields.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE VICINITY OF THE TRAVER PPSA

ANIMALS – cont'd.

State Species of Special Concern or Fully Protected

Species	Status	Habitat	Occurrence within the PPSA
Tricolored Blackbird (*Agelaius tricolor*)	CSC	Breeds in colonies near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	**Possible.** Suitable foraging habitat for tricolored blackbirds occurs in the agricultural fields of the PPSA, but breeding habitat is absent.
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in or over agricultural fields and orchards.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings, trees, and tunnels.	**Possible.** Individuals of this species could potentially roost in trees or buildings of the PPSA, and forage in flight over agricultural fields.

Occurrence Terminology:

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 because habitat requirements not met.

STATUS CODES

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

CNPS	California Native Plant Society 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		

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION

2.5.1 Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Federal Listing Status: Threatened; State Listing Status: None.

Ecology of the species. The USFWS listed the valley elderberry longhorn beetle (VELB) as a threatened species under provisions of the Federal Endangered Species Act in 1980 after alteration of the species' habitat reduced the known populations of the beetle to a few areas in the Central Valley. On October 2, 2012, the VELB was proposed for removal from the federal list of endangered and threatened wildlife (50 CFR Part 17); however, until delisting actually occurs, federal protections for this species remains in place.

The VELB is generally found along waterways and in floodplains that support blue elderberry shrubs, as both larvae and adults feed only on this plant. After mating in June, female VELB lay their eggs in crevices of elderberry bark. Upon hatching, the larvae tunnel into the stems of the shrub, where they spend 1-2 years eating the interior wood. The larvae metamorphose into adults in the springtime, exiting the elderberry shrubs through holes chewed through the wood. Because the exit holes persist, they can be used as an indicator of past and/or present VELB usage. Although VELB are not known to be strong fliers, they may fly up to two miles when intact elderberry habitat is available. The dispersal capabilities of the VELB are little known; however, in the Central Valley it is likely they follow drainage courses where elderberries regularly grow.

Potential to occur onsite. Three elderberry shrubs are located within an expanse of ruderal land northeast of the Foster Farms industrial complex. The shrubs are bounded by a circular driveway associated with the industrial complex, and beyond that, a parking lot, industrial buildings, and the adjacent railroad yard. Analysis of aerial imagery suggests that the closest riparian corridor—and presumably, the closest intact elderberry habitat—is approximately 4 miles west of these shrubs at Peoples Ditch. The closest documented occurrence of VELB is approximately 10 miles north of the shrubs near Reedley. Due to the apparent isolation of these shrubs from other elderberries and likely source populations of VELB, habitation of the shrubs by VELB is

only a remote possibility. No exit holes were observed in the stems of these shrubs at the time of the field survey.

A focused survey for elderberry shrubs was not conducted as part of the present analysis. Additional shrubs might occur elsewhere in the PPSA on lands not accessible or fully visible at the time of the April and June 2014 field surveys, which included orchard interiors and the heart of the industrial complex. However, if elderberry shrubs are present in these areas, they would be unlikely to be inhabited by VELB for the reasons given above.

2.5.2 Swainson's Hawk (*Buteo swainsoni*). Federal Listing Status: None; State Listing Status: Threatened

Ecology of the species. Swainson's hawks are large, long-winged, broad-tailed hawks with a high degree of mate and territorial fidelity. They are breeding season migrants to California, arriving at their nesting sites in March or April. The young hatch sometime between March and July and fledge 4 to 6 weeks later. By October, most birds have left for wintering grounds in South America. In the Central Valley, Swainson's hawks typically nest in large trees along riparian systems, but may also nest in oak groves, or lone, mature trees in agricultural fields or along roadsides. Nest sites are typically located adjacent to suitable foraging habitat. Swainson's hawks forage in large, open fields with abundant prey, including grasslands or lightly grazed pastures, alfalfa and other hay crops, and certain grain and row croplands. Their designation as a California Threatened species is based on population decline due in part to loss of foraging habitat to urban development (CDFG 1994).

Potential to occur onsite. Swainson's hawks are well-known from the vicinity of the PPSA. The CNDDB lists three nesting occurrences of Swainson's hawks within a four-mile radius of the PPSA (see Figure 4), including two nests in eucalyptus trees in the median of Highway 99. The PPSA consists primarily of *Prunus* sp. orchard land unsuitable for nesting and foraging by Swainson's hawk. However, Swainson's hawks could nest in the eucalyptus trees along Highway 99 that border the western block of the PPSA, or in the eucalyptus trees along Highway 99 approximately 200 feet west of the eastern block and 500 feet west of the northern block of the PPSA. The trees west of the eastern block is more likely, as suitable foraging habitat—

including the small dry-farmed wheat field of the PPSA—occurs immediately adjacent to these trees. Swainson's hawks are likely to forage in the dry-farmed wheat field of the PPSA, where burrowing rodent activity was prevalent at the time of the field survey. Swainson's hawks may occasionally forage in the corn field of the PPSA, after harvest, but this field represents only a marginal foraging option for this species due to intensive agricultural practices, an apparent lack of small mammal prey, and a high level of surrounding disturbance.

2.5.3 San Joaquin Kit Fox (*Vulpes macrotus mutica*). Federal Listing Status: Endangered; State Listing Status: Threatened

Ecology of the species. By the time the San Joaquin kit fox (SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. Over two-thirds of the PPSA comprises orchard and industrial/residential land uses unsuitable for kit fox denning and foraging. The remaining one-third of the PPSA consists of the highly-maintained corn field and dry-farmed wheat field east of Highway 99. The corn field is unsuitable for denning by kit fox due to regular ground disturbance and high levels of surrounding human activity, and only marginally suitable for foraging due to an apparent lack of small mammal prey. The dry-farmed wheat field does not appear to be regularly maintained, and at the time of the field survey appeared to support a considerable population of burrowing rodents; therefore, this field could conceivably be used by kit fox for both foraging and denning.

However, in order to access habitats of the PPSA, kit fox must first occur in the project vicinity. This is unlikely for several reasons. First, kit fox have never been documented on the PPSA or surrounding lands. The closest documented observation of kit fox is from approximately four miles southeast of the PPSA in remnant natural lands north of the St. John's River (see Figure 5). Second, all documented occurrences of kit fox within ten miles of the PPSA are from more than 35 years ago, save a 2003 occurrence documented in an alfalfa field approximately 5.5 miles southeast of the PPSA. Third, all kit fox observations within ten miles of the PPSA have been made in natural lands associated with waterways or in large expanses of agricultural fields; there is not a regional precedent for kit fox occurrence in small agricultural fields isolated from other potential habitat by a matrix of orchards and industrial and urban uses. Finally, the PPSA is situated over 70 miles away from the nearest kit fox core populations.

In summary, the San Joaquin kit fox is not expected to occur within the PPSA because 1) they have never been documented in the immediate vicinity of the PPSA, 2) their occurrence in the larger vicinity of the PPSA is primarily historical in nature, and 3) what little habitat exists for this species within the PPSA is surrounded by extensive unsuitable habitats.

2.5.4 Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern.

Ecology of the species. The burrowing owl is primarily a grassland species, but may also occur in open shrub lands, grazed pastures, and occasionally agricultural lands. The primary indicators

of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation, with only sparse areas of shrubs or taller vegetation. Burrowing owls roost and nest in the burrows of California ground squirrels, and occasionally also badger, coyote, or fox. The burrowing owl diet includes a broad array of arthropods, small rodents, birds, reptiles, and amphibians. In California, burrowing owl survival and reproductive success appears linked to rodent populations, particularly California vole (*Microtus californicus*) (Gervais et al. 2006). In agricultural areas of the San Joaquin Valley, burrowing owls primarily forage within 600 meters of their nest burrows (Gervais et al. 2003). The burrowing owl was designated a California Species of Special Concern in 1978 following long-term population decline, primarily due to loss of habitat to development and agricultural practices.

Potential to occur onsite. Burrowing owls could theoretically roost or nest in those portions of the PPSA containing burrows of suitable size, and forage in open areas supporting a sufficient prey base. Burrows of suitable size for burrowing owl are located along the ruderal margins of roads and irrigation ditches throughout the PPSA, in and around the industrial complex and railroad yard, and throughout the dry-farmed wheat field. High levels of human disturbance and lack of nearby foraging opportunities would likely preclude burrowing owls from roosting or nesting in most such areas; however, burrows adjacent to the agricultural fields of the PPSA along Banks Ditch and Road 44 and burrows throughout the dry-farmed wheat field could potentially be used. Open areas suitable for foraging consist of the dry-farmed wheat field and possibly also the highly-maintained corn field, although intensive agricultural practices in the latter likely limit prey availability.

Burrowing owls are known to occur in the PPSA vicinity. The CNDDB lists two occurrences of burrowing owl within a four-mile radius of the PPSA (see Figure 4), both located near Cross Creek between 2 and 3 miles south and southeast of the dry-farmed wheat field, which represents the southern extent of the PPSA.

2.6 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds,

reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the CDFW, and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

The PPSA contains two irrigation ditches (Banks Ditch and Traver Canal) that would likely be considered jurisdictional by the USACE on the basis of their connections with jurisdictional waters both upstream and downstream of the PPSA. Banks Ditch passes through the eastern block of the PPSA for a distance of approximately 3,400 linear feet and is connected to Cross Creek. Cross Creek historically flowed into Tulare Lake, which at times used to overflow into the San Joaquin River. Now Cross Creek ends in a series of distributary channels within the Tulare Lake Bed. Traver Canal passes through the northern bock of the PPSA for a distance of approximately 2,235 feet and is connected to the Kings River. The USACE has set a precedent of claiming tributaries of the Tulare Lake Basin due to historic connectivity and the Kings River is also a jurisdictional water. The USACE considers artificially constructed waterways such as Banks Ditch and Traver Canal jurisdictional if they both receive and deliver water to a water of the U.S. Therefore, Banks Ditch and Traver Canal would likely also be considered a water of the U.S.

2.7 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.2.3, the USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the PPSA. However, as shown on Figure 4, critical habitat for both the California tiger salamander and vernal pool tadpole shrimp occurs in natural lands surrounding Cross Creek, 1 to 3 miles south and southeast of the PPSA.

2.8 NATURAL COMMUNITIES OF SPECIAL CONCERN

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for

the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 or lower (on a 1-5 scale) is considered of special concern. Examples of natural communities of special concern in the vicinity of the project site include vernal pools and various types of riparian forest (Sawyer, Keeler-Wolf and Evens 2012).

All of the vegetation associations present on the project site are man-made and dominated by non-native species, and therefore would not be considered natural communities of special concern.

2.9 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. No portion of the PPSA has the potential to function as a wildlife movement corridor. However, the Pacific flyway, one of four major bird migration routes in North America, passes over the PPSA and much of the rest of California.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

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 *California Environmental Quality Act, Statute and Guidelines* (AEP 2012), "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 General Plan Policies of County of Tulare

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The Tulare County General Plan released an update in 2003 that is valid through 2030. Implementation of goals in the Tulare County General Plan is accomplished via a set of policies specific to each goal. Please refer to Appendix F for a copy of the plan.

Relevant biological resource goals of the Tulare County General Plan include:

- protecting rare and endangered species;

- limiting development in environmentally sensitive areas;

- encouraging cluster development in areas with moderate to high potential for sensitive habitat;

- encouraging the planting of native trees, shrubs, and grasslands preserve;

- requiring open space buffers between development projects and significant watercourse, riparian vegetation, wetlands, and other sensitive habitats and natural communities;

- coordinating with other government land management agencies to preserve and protect biological resources;
- encouraging appropriate access to resource-managed lands;
- providing opportunities for hunting and fishing activities;
- implementing pesticide controls to limit effects on natural resources; and
- supporting the establishment and administration of a mitigation banking program.

3.2.2 Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a proposed 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.

3.2.3 Designated Critical Habitat

The USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as "(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species." The Act goes on to define "conservation" as "the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary."

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species' "primary constituent elements," or physical or biological features of the landscape that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.2.4 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 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 birds native to the United States, even those that are non-migratory. The FMBTA 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 FMBTA (Section 3513), as well as any other native non-game bird (Section 3800).

3.2.5 Birds of Prey

Birds of prey are protected in California under provisions of the 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.

3.2.6 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.

3.2.7 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 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.

The USACE regulates the filling or grading of jurisdictional waters 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 fill into jurisdictional waters 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 RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards.

The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System (NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

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 (2003). Activities that would disturb these waters are regulated by the CDFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

The 383-acre PPSA is proposed for inclusion in the Traver Community Plan area. The following subsections assume that all habitats of the PPSA will be impacted by future development under a number of individual projects. Potentially significant project impacts to biological resources and mitigations are discussed below.

3.3.1 Project Impacts to the Valley Elderberry Longhorn Beetle (Prior to Delisting)

Potential Impacts. As discussed in Section 2.5.1 of this document, three elderberry shrubs are located on ruderal land associated with the Foster Farms industrial complex (see Figure 3), and

additional shrubs could theoretically be present in those portions of the orchards and industrial complex that were not accessible/visible at the time of the April and June 2014 field surveys. Shrubs of the PPSA are unlikely to be inhabited by VELB due to their location within a mosaic of highly disturbed lands and their isolation from riparian areas and other elderberry shrubs. For the same reasons, project-related removal of these shrubs would not constitute significant loss of habitat under CEQA. However, because the USFWS considers the removal of elderberry shrubs below 3,000 feet in elevation with stems greater than one inch in diameter tantamount to "take" of VELB, USFWS incidental take authorization would be required before the shrubs could be removed by project activities.

Although highly unlikely, project-related mortality of individual beetles is a significant impact of future development of the PPSA under CEQA. In the absence of USFWS incidental take authorization, any project-related mortality of VELB would violate the federal Endangered Species Act.

Mitigation. The following measures adapted from the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999) (Appendix D) will be implemented, as applicable, for all project activities occurring in the vicinity of elderberry shrubs. Measures 3.3.1a through 3.3.1c are intended to avoid and minimize the potential of project-related mortality of VELB. Although project-related loss of VELB habitat is a less-than-significant impact under CEQA, any project in the PPSA that removes elderberry shrubs will need to provide compensatory mitigation under the provisions of the USFWS incidental take authorization issued for the project(s). Measure 3.3.1d presents the compensatory mitigation scheme used by the USFWS.

> ***Mitigation Measure 3.3.1a (Avoidance).*** Prior to initiation of a given project within the PPSA, a survey for elderberry shrubs will be conducted by a qualified biologist, unless the entire project area is completely devoid of shrubby vegetation, in which case a elderberry survey is not necessary. If elderberry shrubs are identified during the survey, then they will be avoided. Typically, the USFWS considers a 100-foot disturbance-free buffer around elderberry shrubs complete avoidance. However, a buffer of as little as 20 feet may be arranged in consultation with the USFWS. The buffer will be clearly delineated with orange construction fencing with the appropriate signage posted. This

elderberry avoidance area will be clearly marked with signs, fencing, and/or flagging, and maintained for the duration of work in that area. No construction personnel or equipment shall enter the elderberry avoidance area, except for as provided under *Mitigation Measure 3.3.3b* below.

***Mitigation Measure 3.3.1b* (*Construction Monitoring*).** If project activities necessitate temporary entry into the elderberry avoidance area, approval will first be obtained from the USFWS and a qualified biologist will be on-site to monitor such activities for their duration within the avoidance area.

Mitigation Measure 3.3.1c (Employee Education Program). Prior to implementation of projects with elderberry shrubs on site, construction personnel will receive worker environmental awareness training in the identification of the VELB and its host plant.

Mitigation Measure 3.3.1d (Compensation). If it is not feasible to completely avoid all elderberry shrubs, then impacts to the shrubs will be mitigated in accordance with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999). This generally involves 1) conducting a protocol-level elderberry survey to assess the degree of "take" that will occur, 2) transplanting the shrubs to on-site or off-site lands protected in perpetuity under conservation easement ("conservation area"), or to a VELB mitigation bank, and 3) replacing each impacted stem with new elderberry plantings at a ratio of 1:1 to 1:8 (depending on stem diameter, presence of beetle exit holes, and habitat type) *or* purchasing an equivalent number of credits at a VELB mitigation bank.

Implementation of the above measures, as applicable, will reduce potential project impacts to the valley elderberry longhorn beetle to a less than significant level, and will ensure that future development activities within the PPSA remain in compliance with federal laws protecting this species.

3.3.2 Project-Related Mortality of San Joaquin Kit Fox

Potential Impacts. As discussed in Section 2.5.3, the San Joaquin kit fox is unlikely to occur within the PPSA. However, based on past occurrences of kit fox in the 10-mile vicinity of the

PPSA, it is remotely possible that individual foxes may pass through and possibly forage on the site from time to time during dispersal movements. If a kit fox were present at the time of future construction activities in the PPSA, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of future development of the PPSA would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.

Mitigation. Prior to the construction of any projects within the PPSA, the following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance* (Appendix E) will be implemented.

> ***Mitigation Measure 3.3.2a (Pre-construction Surveys).*** Pre-construction surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance, construction activities, and/or any project activity likely to impact the San Joaquin kit fox. These surveys will be conducted in accordance with the USFWS *Standard Recommendations*. The primary objective is to identify kit fox habitat features (e.g. potential dens and refugia) on the project site and evaluate their use by kit foxes through use of remote monitoring techniques such as motion-triggered cameras and tracking medium. If an active kit fox den is detected within or immediately adjacent to the area of work, the USFWS and CDFW shall be contacted immediately to determine the best course of action.
>
> ***Mitigation Measure 3.3.2b (Avoidance).*** Should a kit fox be found using any of the sites during preconstruction surveys, the project will avoid the habitat occupied by the kit fox and the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified.
>
> ***Mitigation Measure 3.3.2c (Minimization).*** Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes. Minimization measures include, but are not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g.,

pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash.

Mitigation Measure 3.3.2d (Employee Education Program). Prior to the start of construction the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation.

Mitigation Measure 3.3.2e (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level and ensure that future development activities within the PPSA remain in compliance with state and federal laws protecting this species.

3.3.3 Project-Related Mortality of Burrowing Owl

Potential Impacts. As discussed in Section 2.5.4, burrowing owls have the potential to nest or roost in the dry-farmed wheat field and along the margins of Banks Ditch and Road 44 adjacent to that field and the corn field to the north. Although highly unlikely due to lack of nearby foraging habitat and high levels of human disturbance, burrowing owls could also conceivably use small mammal burrows located in and around the industrial complex and along road margins elsewhere in the PPSA. If one or more owls were present in these areas at the time of construction, then construction activities would have the potential to injure or kill these individuals. Mortality of individual burrowing owls would violate California Fish and Game

Code and the federal Migratory Bird Treaty Act, and is considered a significant impact of the project under CEQA.

Mitigation. Prior to the initiation of project-related activities involving ground disturbance or heavy equipment use on those portions of the PPSA that contain suitable burrowing owl habitat, the following measures will be implemented, adapted from the *Staff Report on Burrowing Owl Mitigation* (CDFG 1995 and 2012).

> ***Mitigation Measure 3.3.3a (Pre-construction Surveys).*** A pre-construction survey for burrowing owls will be conducted by a qualified biologist within 30 days of the onset of project-related activities involving ground disturbance or heavy equipment use. The survey area will include all suitable habitat on and within 500 feet of project impact areas, where accessible.
>
> ***Mitigation Measure 3.3.3b (Avoidance of Active Nests).*** If pre-construction surveys and subsequent project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are located within or near project impact areas, a 250-foot construction setback will be established around active owl nests, or alternate avoidance measures implemented in consultation with CDFW. The buffer areas will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.
>
> ***Mitigation Measure 3.3.3c (Passive Relocation of Resident Owls).*** During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may be passively relocated to alternative habitat in accordance with a relocation plan prepared by a qualified biologist. Passive relocation may include one or more of the following elements: 1) establishing a minimum 50 foot buffer around all active burrowing owl burrows, 2) removing all suitable burrows outside the 50 foot buffer and up to 160 feet outside of the impact areas as necessary, 3) installing one-way

doors on all potential owl burrows within the 50 foot buffer, 4) leaving one-way doors in place for 48 hours to ensure owls have vacated the burrows, and 5) removing the doors and excavating the remaining burrows within the 50 foot buffer.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level and ensure that the project is in compliance with state and federal laws protecting this species.

3.3.4 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds

Potential Impacts. The majority of the PPSA consists of habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Two special-status birds, the Swainson's hawk and loggerhead shrike, also have the potential to nest within the PPSA. Orchard trees of the PPSA could be used by mourning doves or American robins, while mature trees bordering the PPSA along the ruderal margin of Highway 99 could be used by the western kingbird, Bullock's and hooded orioles, and various raptors, including the Swainson's hawk. Killdeers may nest on bare ground or gravel surfaces in ruderal or industrial areas of the PPSA, and the house finch may nest in the PPSA's buildings. Cliff swallows could nest in the culverts at Road 44's crossing of Banks Ditch. Raptors and migratory birds nesting within the PPSA at the time that individual projects are implemented have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.

Mitigation. The following measures will be implemented prior to the start of project activities within the PPSA.

***Mitigation Measure 3.3.4a* (*Avoidance*).** In order to avoid impacts to nesting raptors and migratory birds, individual projects within the PPSA will be constructed, where possible, outside the nesting season, or between September 1st and January 31st.

Mitigation Measure 3.3.4b (Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days of the onset of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

Mitigation Measure 3.3.4c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level, and will ensure that the project remains in compliance with state and federal laws protecting these species.

3.3.5 Project-Related Mortality of Roosting Bats

Potential Impacts. Development of the PPSA may result in the removal of buildings and mature trees that provide potential roosting habitat for bats, including special status species such as the pallid bat and western mastiff bat. If trees or buildings removed by construction activities contain colonial roosts, many individual bats could be killed. Such a mortality event is considered a potentially significant impact of the project under CEQA.

Mitigation. The following measures will be implemented for construction activities involving the removal of buildings or mature trees.

Mitigation Measure 3.3.5a (Temporal Avoidance). To avoid potential impacts to maternity bat roosts, removal of buildings and trees should occur outside of the period

between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

Mitigation Measure 3.3.5b (Preconstruction Surveys). If removal of buildings or trees is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to these activities, a qualified biologist will survey affected buildings and trees for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

Mitigation Measure 3.3.5c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted via partial dismantlement of trees or structures prior to full removal under the direction of a qualified biologist to ensure that no harm or "take" of any bats occurs as a result of construction activities.

Mitigation Measure 3.3.5d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, a disturbance-free buffer will be established around the colony and remain in place until a qualified biologist deems that the nursery is no longer active. The disturbance-free buffer will range from 50 to 100 feet as determined by the biologist.

Implementation of the above measure will reduce impacts to roosting bats to a less than significant level under CEQA.

3.3.6 Project-Related Impacts to Waters of the United States

Potential Impacts. As discussed in Section 2.6, the hydrologic features on the PPSA include the 3,400 linear foot stretch of Banks Ditch and the 2,235 foot stretch of Traver Canal. Both would likely be considered jurisdictional by the USACE; however, the jurisdictional status of water features is determined by the USACE upon review and verification of a wetland delineation prepared for the project area. The project could result in potentially significant impacts to these

ditches, should future development within the planning area require filling large portions or all of the ditches. Project impacts to these ditches of 0.5 acre or more would be considered potentially significant. Impacts to waters of the U.S., regardless of the size of the impact, are also subject to the permit requirements of Section 404 and 401 of the Clean Water Act. The placement of fill within any wetlands or other jurisdictional features will require 1) a Clean Water Act permit from the USACE, and 2) a Water Quality Certification from the RWQCB. These permits cannot be issued without an accepted preliminary jurisdictional determination or a verified approved wetland delineation by the USACE.

Mitigation. The following measures will reduce impacts to jurisdictional waters to a less than significant level.

> ***Mitigation Measure 3.3.6a (Avoidance and/ or Minimization).*** Individual projects within the PPSA will be designed to avoid and/or minimize impacts to waters of the U.S. to the maximum extent practicable while still achieving its goal of expanding the planning area.
>
> ***Mitigation Measure 3.3.6b (Compliance with Terms of the Permits).*** If Banks Ditch or Traver Canal is determined to be a water of the U.S. by the USACE, then the applicant will be required to follow the permit requirements which may include an employee education program, implementation of Best Management Practices, placement of protective fencing between nearby unaffected waters and construction areas during construction, removal of temporary fills, and restoring temporarily disturbed areas to pre-project conditions, among others.
>
> ***Mitigation Measure 3.3.6c*** (***Compensatory Mitigation).*** If the ditches are determined to be waters of the U.S., then compensatory mitigation will be provided at a minimum of 1:1 for all losses of waters that exceed 0.5 acre. Compensatory mitigation will be provided in the form of either on-site or off site preservation or creation, through payment into an in-lieu fee program (if one is available), purchase of credits from an approved Mitigation Bank in the vicinity, or some combination of one or more of these options. Preserved and/or created waters would have to be placed under conservation

easement held by a third party and managed in perpetuity with an approved endowment fund. If losses are 0.5 acre or less, then impacts would be considered to be less than significant, and compensatory mitigation would not be necessary for purposes of CEQA.

Implementation of the above measures would reduce potential impacts to waters of the U.S. to a less-than-significant level and ensure that the project remains in compliance with state and federal laws protecting this resource.

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Loss of Habitat for Special Status Plants

Potential Impacts. Nine special status vascular plant species are known to occur in the vicinity of the project site: heartscale (*Atriplex cordulata* var. *cordulata*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), subtle orache (*Atriplex subtilis*), recurved larkspur (*Delphinium recurvatum*), spiny sepaled button-celery (*Eryngium spinosepalum*), San Joaquin Valley Orcutt grass (*Orcuttia inaequalis*), and San Joaquin adobe sunburst (*Pseudobahia peirsonii*) (see Table 1). Because of the many decades of agricultural and industrial/residential disturbance, habitat for these nine plant species is absent from orchards, agricultural fields, and industrial/residential areas of the PPSA. The ruderal margins of the agricultural and industrial areas are regularly disturbed by humans and would not support populations of any of these special status plant species. Furthermore, presence of any of these plants would have been detected during the April and June 2014 field surveys, if present. No special status plant species have been detected within a 4 mile radius of the site (see Figure 4). Therefore, the proposed project would not affect regional populations of these species and impacts would be less than significant.

Mitigation. Mitigation measures are not warranted.

3.4.2 Loss of Habitat for Special Status Animals Absent or Unlikely to Occur in the PPSA

Potential Impacts. Of the 15 special status animal species potentially occurring in the region, six species would be absent or unlikely to occur on within the PPSA (see Table 1). These

include the vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), California tiger salamander (*Ambystoma californiense*), San Joaquin kit fox, western spadefoot (*Spea hammondii*), and western pond turtle (*Actinemys marmorata*). Loss of habitat as a result of future development of the PPSA would have no effect on these species because there is little or no likelihood that they are present.

Mitigation. No mitigation is warranted.

3.4.3 Loss of Habitat for Special Status Animals that May Occur in the PPSA

Potential Impacts. Of the 15 special status animal species potentially occurring in the region, nine species have the potential to occur within the PPSA in association with breeding, foraging, or both. Species that could potentially breed and forage in the PPSA include the valley elderberry longhorn beetle, Swainson's hawk, loggerhead shrike (*Lanius ludovicianus*), burrowing owl, pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis* ssp. *californicus*). Species that could potentially forage in the PPSA, but would breed elsewhere, include the white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), and tricolored blackbird (*Agelaius tricolor*). The valley elderberry longhorn beetle has been considered previously (see Section 3.3.1) and is not readdressed in this section.

As summarized in Table 1, the mature eucalyptus trees bordering the western block of the PPSA along Highway 99 represent potential breeding habitat for the Swainson's hawk, loggerhead shrike, pallid bat, and western mastiff bat. The two bat species could also potentially breed in buildings of the PPSA's industrial/residential areas. Any loss of mature trees and buildings associated with future development of the PPSA would be unlikely to adversely affect populations of these species because 1) eucalyptus trees in the Highway 99 right-of-way and industrial/residential buildings are less than ideal for breeding by these bird and bat species due to high levels of surrounding human disturbance, 2) the PPSA contains relatively few such habitat features, approximately ten eucalyptus trees and eight industrial/residential structures, and 3) such features are abundant in the region.

The 50-acre corn field and 10-acre dry-farmed wheat field in the eastern block of the PPSA represent potential foraging habitat for all eight species considered in this section, and the dry-farmed wheat field could potentially serve as breeding habitat for the burrowing owl. The corn field would be considered marginal foraging habitat for these species due to intensive agricultural practices; moreover, for much of the year, vegetation height in this field would be incompatible with the foraging strategies of the six avian species. The dry-farmed wheat field experiences minimal disturbance, appears to support a sufficient prey base for the eight species in question, and contains California ground squirrel burrows suitable for secondary use by the burrowing owl. However, neither field provides regionally important habitat for the eight bird and bat species in question. Considerable agricultural habitat suitable for foraging will continue to be available on surrounding lands following development of the PPSA, and higher quality breeding habitat for the burrowing owl is available in grasslands of the region. Therefore, the loss of this 60-acre area is unlikely to adversely affect populations of these species.

Orchard land of the PPSA represents potential foraging habitat for the pallid bat. However, as with the other habitat types discussed in this section, orchard land is regionally abundant, and loss of approximately 215 acres of orchard associated with future development of the PPSA is unlikely to adversely affect pallid bat populations.

Mitigation. No mitigation is warranted.

3.4.4 Project Impacts to Wildlife Movement Corridors

Potential Impacts. The PPSA consists of and is surrounded by developed and/or highly disturbed lands that do not contain important movement corridors for native wildlife. Birds using the Pacific flyway will continue to do so following project development. Future development of the PPSA will result in a less than significant effect on regional wildlife movements.

Mitigation. No mitigation is warranted.

3.4.5 Disturbance to Riparian Habitat or other Sensitive Habitats

Potential Impacts. Riparian habitat is absent from the PPSA. The agricultural and disturbed lands that comprise the PPSA are not considered sensitive habitats, and are not of significant importance to regional wildlife populations. Because riparian and other sensitive habitats are absent, future development of the PPSA will have no impact on these habitats.

Mitigation. Mitigations are not warranted.

3.4.6 Project Impacts to Designated Critical Habitat

Potential Impacts. As discussed, designated critical habitat is absent from the PPSA. The nearest units of critical habitat are located approximately 1 to 3 miles south and southeast of the PPSA along Cross Creek. Future development of the PPSA does not have the potential to impact these units of critical habitat.

Mitigation. No mitigation is warranted.

3.4.7 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Potential Impacts. Extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. However, agricultural and industrial/residential lands in and around the PPSA are nearly level and are subjected to regular soil disturbance that exposes barren soils. The only hydrologic features found in the immediate vicinity of the PPSA where grading could occur (Banks Ditch and Traver Canal) are highly maintained and were dry during the springtime field surveys. Only during an extremely large rainfall event could eroded soil conceivably travel downstream to Cross Creek or Kings River. Therefore, impacts to water quality from project construction are considered less than significant.

It should be noted that projects involving the grading of more than one acre of land must be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the RWQCB.

Mitigation. No mitigations are warranted.

3.4.8 Local Policies or Habitat Conservation Plans

Potential Impacts. The projects will be implemented in accordance with the goals and policies of the Tulare County General Plan. No known HCPs or NCCPs are in effect for the area. Therefore, the projects are not expected to conflict with local policies or habitat conservation plans.

Mitigation. No mitigation is warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PPSA

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

The vascular plant species listed below were observed on the project site during a site survey conducted by Live Oak Associates, Inc. on April 16 and June 26, 2014. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
NR - No review
NA - No agreement
NI - No investigation

ASTERACEAE – Sunflower Family		
Erigeron bonariensis	Flax-leaved Horseweed	UPL
Conyza canadensis	Canadian Horseweed	FAC
Helianthus annuus	Common Sunflower	FACU
Lactuca serriola	Prickly Lettuce	FAC
Xanthium strumarium	Common Cocklebur	FAC+
ADOXACEAE- Elderberry Family		
Sambucus nigra ssp. *caerulea*	Blue Elderberry	FAC
BORAGINACEAE – Borage Family		
Amsinckia intermedia	Rancher's Fireweed	UPL
CHENOPODIACEAE – Goosefoot Family		
Chenopodium album	Common Lambsquarters	FACU
Salsola tragus	Russian Thistle	FACU
CYPERACEAE – Umbrella Sedge Family		
Cyperus eragrostis	Tall Flatsedge	FACW
MALVACEAE – Mallow Family		
Malva nicaeensis	Bull Mallow	UPL
MYRTACEAE – Myrtle Family		
Eucalyptus globulus	Blue Gum Eucalyptus	UPL
ONAGRACEAE – Fuschia Family		
Epilobium brachycarpum	Willow Herb	UPL
PALMAE – Palm Family		
Washingtonia filifera	Washington Fan Palm	FACW
POACEAE – Grass Family		
Avena fatua	Wild Oats	UPL
Bromus diandrus	Ripgut Brome	UPL
Cynodon dactylon	Bermuda Grass	FAC
Hordeum murinum ssp. *leporinum*	Barnyard Barley	FACU
Leptochloa fusca ssp. *fascicularis*	Bearded Sprangletop	FACW
Triticum sp.	Cultivated Wheat	UPL

Zea mayz ssp. *mayz*	Cultivated Corn	UPL
ROSACEAE – Rose Family		
Prunus avium	Cultivated Cherry	UPL
Prunus dulcis	Cultivated Almond	UPL
Prunus persica	Cultivated Peach	UPL
Prunus persica var. *nectarine*	Cultivated Nectarine	UPL
SOLANACEAE – Potato Family		
Datura stramineum	Jimson Weed	UPL
Nicotiana glauca	Tree Tobacco	FAC
TAMARICACEAE – Tamarix Family		
Tamarix parviflora	Small Flower Tamarisk	FAC
ZYGOPHYLLACEAE – Bean and Caltrop Family		
Tribulus terrestris	Puncturevine	UPL

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PPSA

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PPSA

The species listed below are those that may reasonably be expected to use the habitats of the PPSA routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the PPSA on April 16 and June 26, 2014 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)
ORDER: SALIENTIA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and relatives)
Pacific Chorus Frog (*Pseudacris regilla*)
FAMILY: RANIDAE (True Frogs)
Bullfrog (*Lithobates catesbeiana*)

CLASS: REPTILIA (Reptiles)
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Western Fence Lizard (*Sceloporus occidentalis*)
*Side-blotched Lizard (*Uta stansburiana*)
FAMILY: TEIIDAE (Whiptails and relatives)
Western Whiptail (*Cnemidophorus tigris*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Glossy Snake (*Arizona elegans*)
Gopher Snake (*Pituophis melanoleucus*)
Common Kingsnake (*Lampropeltis getulus*)
Long-nosed Snake (*Rhinocheilus lecontei*)
Common Garter Snake (*Thamnophis sirtalis*)
FAMILY: VIPERIDAE (Vipers)
Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES (Birds)
ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)
FAMILY: ARDEIDAE (Herons and Bitterns)
Great Blue Heron (*Ardea herodias*)
Cattle Egret (*Bubulcus ibis*)
Great Egret (*Ardea alba*)
Snowy Egret (*Egretta thula*)
FAMILY: CATHARTIDAE (American Vultures)
Turkey Vulture (*Cathartes aura*)
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)
White-tailed Kite (*Elanus leucurus*)
Northern Harrier (*Circus cyaneus*)
*Red-tailed Hawk (*Buteo jamaicensis*)
Ferruginous Hawk (*Buteo regalis*)
Sharp-Shinned Hawk (*Accipiter striatus*)
Cooper's Hawk (*Accipiter cooperii*)
Swainson's Hawk (*Buteo swainsoni*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
*American Kestrel (*Falco sparverius*)

ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE (Plovers and relatives)
***Killdeer (*Charadrius vociferus*)

ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Rock Pigeon (*Columba livia*)
*Mourning Dove (*Zenaida macroura*)
*Eurasian Collared-Dove (*Streptopelia decaocto*)

ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
Burrowing Owl (*Athene cunicularia*)
Great Horned Owl (*Bubo virginianus*)
Western Screech Owl (*Otus kennicottii*)

ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
*Black-chinned Hummingbird (*Archilochus alexandri*)
Anna's Hummingbird (*Calypte anna*)
Rufous Hummingbird (*Selasphorus rufus*)

ORDER: PICIFORMES (Woodpeckers and relatives)
FAMILY: PICIDAE (Woodpecker and Wrynecks)
Northern Flicker (*Colaptes chrysoides*)

ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
*Western Kingbird (*Tyrannus verticalis*)
FAMILY: LANIIDAE (Shrikes)
Loggerhead Shrike (*Lanius ludovicianus*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
Western Scrub Jay (*Aphelocoma coerulescens*)
*American Crow (*Corvus brachyrhynchos*)
Common Raven (*Corvus corax*)
FAMILY: ALAUDIDAE (Larks)
Horned Lark (*Eremophila alpestris*)

FAMILY: HIRUNDINIDAE (Swallows)
Cliff Swallow (*Hirundo pyrrhonota*)
Barn Swallow (*Hirundo rustica*)
FAMILY: TURDIDAE
*American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
*Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
*European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
American Pipit (*Anthus rubescens*)
FAMILY: BOMBYCILLIDAE (Waxwings)
Cedar Waxwing (*Bombycilla cedrorum*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Sparrows and Relatives)
Savannah Sparrow (*Passerculus sandwichensis*)
White-crowned Sparrow (*Zonotrichia leucophrys*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
*Red-winged Blackbird (*Agelaius phoeniceus*)
Tricolored Black Bird (*Agelaius tricolor*)
Western Meadowlark (*Sturnella neglecta*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
Brown-headed Cowbird (*Molothrus ater*)
Bullock's Oriole (*Icterus bullockii*)
Hooded Oriole (*Icterus cucullatus*)
FAMILY: FRINGILLIDAE (Finches)
*House Finch (*Carpodacus mexicanus*)
Lesser Goldfinch (*Carduelis psaltria*)
FAMILY: PASSERIDAE (Old World Sparrows)
*House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)
ORDER: DIDELPHIMORPHIA (Marsupials)
FAMILY: DIDELPHIDAE (Opossums)
Virginia Opossum (*Didelphis virginiana*)
ORDER: CHIROPTERA (Bats)
FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)
Southern Long-nosed Bat (*Leptonycteris curasoae*)
FAMILY: VESPERTILIONIDAE (Evening Bats)
Yuma Myotis (*Myotis yumanensis*)
California Myotis (*Myotis californicus*)
Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)
Western Pipistrelle (*Pipistrellus hesperus*)
Big Brown Bat (*Eptesicus fuscus*)
Pallid Bat (*Antrozous pallidus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)
Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORIDAE (Rabbits and Hares)
Audobon's Cottontail (*Sylvilagus audubonii*)
Black-tailed (Hare) Jackrabbit (*Lepus californicus*)

ORDER: RODENTIA (Rodents)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
*California Ground Squirrel (*Spermophilus beecheyi*)

FAMILY: GEOMYIDAE (Pocket Gophers)
*Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)
Western Harvest Mouse (*Reithrodontomys megalotis*)
Deer Mouse (*Peromyscus maniculatus*)
Norway Rat (*Rattus norvegicus*)
House Mouse (*Mus musculus*)
California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and relatives)
Coyote (*Canis latrans*)
Red Fox (*Vulpes vulpes*)

FAMILY: PROCYONIDAE (Raccoons and relatives)
Raccoon (*Procyon lotor*)

FAMILY: MEPHITIDAE (Skunks)
Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)
Bobcat (*Lynx rufus*)
Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PPSA

Photograph #1 (above). Orchards consisting of almond, nectarine, plum, peach and cherry dominated the northern portions of the PPSA. **Photograph #2 (below).** A highly-maintained corn field was found in the center of the railroad yard in the eastern block of the PPSA.

Photograph #3. Banks Ditch along the eastern boundary of the eastern block of the PPSA. **Photograph #4.** Traver Canal along the northern boundary of the northern block of the PPSA with the orchard habitat of the northern block in the background.

Photograph #5 (above). A dry-farmed wheat field in the eastern block of the PPSA contained many California ground squirrel burrows. **Photograph #6 (below).** Burrows of various sizes were found in ruderal areas of the PPSA.

Photograph #7 (above). Three blue elderberry shrubs were found in the ruderal area near the Foster Farms processing plant found immediately south of Avenue 360 and east of Highway 99. **Photograph #8 (below).** A few large Eucalyptus trees provide suitable nesting habitat for a number of avian species, including the Swainson's hawk and loggerhead shrike.

APPENDIX D: U.S. FISH AND WILDLIFE SERVICE CONSERVATION GUIDELINES FOR THE VALLEY ELDERBERRY LONGHORN BEETLE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

Conservation Guidelines for the
Valley Elderberry Longhorn Beetle
9 July 1999

The following guidelines have been issued by the U.S. Fish and Wildlife Service (Service) to assist Federal agencies and non-federal project applicants needing incidental take authorization through a section 7 consultation or a section 10(a)(1)(B) permit in developing measures to avoid and minimize adverse effects on the valley elderberry longhorn beetle. The Service will revise these guidelines as needed in the future. The most recently issued version of these guidelines should be used in developing all projects and habitat restoration plans. The survey and monitoring procedures described below are designed to avoid any adverse effects to the valley elderberry longhorn beetle. Thus a recovery permit is not needed to survey for the beetle or its habitat or to monitor conservation areas. If you are interested in a recovery permit for research purposes please call the Service's Regional Office at (503) 231-2063.

Background Information

The valley elderberry longhorn beetle (Desmocerus californicus dimorphus), was listed as a threatened species on August 8, 1980 (Federal Register 45: 52803-52807). This animal is fully protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The valley elderberry longhorn beetle (beetle) is completely dependent on its host plant, elderberry (Sambucus species), which is a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. Use of the elderberry by the beetle, a wood borer, is rarely apparent. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. The life cycle takes one or two years to complete. The animal spends most of its life in the larval stage, living within the stems of an elderberry plant. Adult emergence is from late March through June, about the same time the elderberry produces flowers. The adult stage is short-lived. Further information on the life history, ecology, behavior, and distribution of the beetle can be found in a report by Barr (1991) and the recovery plan for the beetle (USFWS 1984).

Surveys

Proposed project sites within the range of the valley elderberry longhorn beetle should be surveyed for the presence of the beetle and its elderberry host plant by a qualified biologist. The beetle's range extends throughout California's Central Valley and associated foothills from about the 3,000-foot elevation contour on the east and the watershed of the Central Valley on the west (Figure 1). All or portions of 31 counties are included: Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Madera, Mariposa, Merced, Napa, Nevada, Placer, Sacramento, San Benito, San Joaquin, San Luis Obispo, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba.

If elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level occur on or adjacent to the proposed project site, or are otherwise located where they may be directly or indirectly affected by the proposed action, minimization measures which include planting replacement habitat (conservation planting) are required (Table 1).

All elderberry shrubs with one or more stems measuring 1.0 inch or greater in diameter at ground level that occur on or adjacent to a proposed project site must be thoroughly searched for beetle exit holes (external evidence of beetle presence). In addition, all elderberry stems one inch or greater in diameter at ground level must be tallied by diameter size class (Table 1). As outlined in Table 1, the numbers of elderberry seedlings/cuttings and associated riparian native trees/shrubs to be planted as replacement habitat are determined by stem size class of affected elderberry shrubs, presence or absence of exit holes, and whether a proposed project lies in a riparian or non-riparian area.

Elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level are unlikely to be habitat for the beetle because of their small size and/or immaturity. Therefore, no minimization measures are required for removal of elderberry plants with no stems measuring 1.0 inch or greater in diameter at ground level with no exit holes. Surveys are valid for a period of two years.

Avoid and Protect Habitat Whenever Possible

Project sites that do not contain beetle habitat are preferred. If suitable habitat for the beetle occurs on the project site, or within close proximity where beetles will be affected by the project, these areas must be designated as avoidance areas and must be protected from disturbance during the construction and operation of the project. When possible, projects should be designed such that avoidance areas are connected with adjacent habitat to prevent fragmentation and isolation of beetle populations. Any beetle habitat that cannot be avoided as described below should be considered impacted and appropriate minimization measures should be proposed as described below.

Avoidance: Establishment and Maintenance of a Buffer Zone

Complete avoidance (i.e., no adverse effects) may be assumed when a 100-foot (or wider) buffer is established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Firebreaks may not be included in the buffer zone. In buffer areas construction-related disturbance should be minimized, and any damaged area should be promptly restored following construction. The Service must be consulted before any disturbances within the buffer area are considered. In addition, the Service must be provided with a map identifying the avoidance area and written details describing avoidance measures.

Protective Measures

1. Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the Service, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.

2. Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.

3. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

4. Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

1. Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants.

2. Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.

3. No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.

4. The applicant must provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed.

5. Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five (5) feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

Transplant Elderberry Plants That Cannot Be Avoided

Elderberry plants must be transplanted if they can not be avoided by the proposed project. All elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level must be transplanted to a conservation area (see below). At the Service's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible the minimization ratios in Table 1 may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1.0 inch or greater in diameter at ground level, may result in take of beetles. Therefore, trimming is subject to appropriate minimization measures as outlined in Table 1.

1. Monitor. A qualified biologist (monitor) must be on-site for the duration of the transplanting of the elderberry plants to insure that no unauthorized take of the valley elderberry longhorn beetle occurs. If unauthorized take occurs, the monitor must have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the Service and to the California Department of Fish and Game.

2. Timing. Transplant elderberry plants when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success.

3. Transplanting Procedure.

    a. Cut the plant back 3 to 6 feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. The trunk and all stems measuring 1.0 inch or greater in diameter at ground level should be replanted. Any leaves remaining on the plant should be removed.

b. Excavate a hole of adequate size to receive the transplant.

c. Excavate the plant using a Vemeer spade, backhoe, front end loader, or other suitable equipment, taking as much of the root ball as possible, and replant immediately at the conservation area. Move the plant only by the root ball. If the plant is to be moved and transplanted off site, secure the root ball with wire and wrap it with burlap. Dampen the burlap with water, as necessary, to keep the root ball wet. Do not let the roots dry out. Care should be taken to ensure that the soil is not dislodged from around the roots of the transplant. If the site receiving the transplant does not have adequate soil moisture, pre-wet the soil a day or two before transplantation.

d. The planting area must be at least 1,800 square feet for each elderberry transplant. The root ball should be planted so that its top is level with the existing ground. Compact the soil sufficiently so that settlement does not occur. As many as five (5) additional elderberry plantings (cuttings or seedlings) and up to five (5) associated native species plantings (see below) may also be planted within the 1,800 square foot area with the transplant. The transplant and each new planting should have its own watering basin measuring at least three (3) feet in diameter. Watering basins should have a continuous berm measuring approximately eight (8) inches wide at the base and six (6) inches high.

e. Saturate the soil with water. Do not use fertilizers or other supplements or paint the tips of stems with pruning substances, as the effects of these compounds on the beetle are unknown.

f. Monitor to ascertain if additional watering is necessary. If the soil is sandy and well-drained, plants may need to be watered weekly or twice monthly. If the soil is clayey and poorly-drained, it may not be necessary to water after the initial saturation. However, most transplants require watering through the first summer. A drip watering system and timer is ideal. However, in situations where this is not possible, a water truck or other apparatus may be used.

Plant Additional Seedlings or Cuttings

Each elderberry stem measuring 1.0 inch or greater in diameter at ground level that is adversely affected (i.e., transplanted or destroyed) must be replaced, in the conservation area, with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1 (new plantings to affected stems). Minimization ratios are listed and explained in Table 1. Stock of either seedlings or cuttings should be obtained from local sources. Cuttings may be obtained from the plants to be transplanted if the project site is in the vicinity of the conservation area. If the Service determines that the elderberry plants on the proposed project site are unsuitable candidates for

transplanting, the Service may allow the applicant to plant seedlings or cuttings at higher than the stated ratios in Table 1 for each elderberry plant that cannot be transplanted.

Plant Associated Native Species

Studies have found that the beetle is more abundant in dense native plant communities with a mature overstory and a mixed understory. Therefore, a mix of native plants associated with the elderberry plants at the project site or similar sites will be planted at ratios ranging from 1:1 to 2:1 [native tree/plant species to each elderberry seedling or cutting (see Table 1)]. These native plantings must be monitored with the same survival criteria used for the elderberry seedlings (see below). Stock of saplings, cuttings, and seedlings should be obtained from local sources. If the parent stock is obtained from a distance greater than one mile from the conservation area, approval by the Service of the native plant donor sites must be obtained prior to initiation of the revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged. Establishing native grasses and forbs may discourage unwanted non-native species from becoming established or persisting at the conservation area. Only stock from local sources should be used.

Examples

Example 1

The project will adversely affect beetle habitat on a vacant lot on the land side of a river levee. This levee now separates beetle habitat on the vacant lot from extant Great Valley Mixed Riparian Forest (Holland 1986) adjacent to the river. However, it is clear that the beetle habitat located on the vacant lot was part of a more extensive mixed riparian forest ecosystem extending farther from the river's edge prior to agricultural development and levee construction. Therefore, the beetle habitat on site is considered riparian. A total of two elderberry plants with at least one stem measuring 1.0 inch or greater in diameter at ground level will be affected by the proposed action. The two plants have a total of 15 stems measuring over 1.0 inch. No exit holes were found on either plant. Ten of the stems are between 1.0 and 3.0 inches in diameter and five of the stems are greater than 5.0 inches in diameter. The conservation area is suited for riparian forest habitat. Associated natives adjacent to the conservation area are box elder (Acer negundo californica), walnut (Juglans californica var. hindsii), sycamore (Platanus racemosa), cottonwood (Populus fremontii), willow (Salix gooddingii and S. laevigata), white alder (Alnus rhombifolia), ash (Fraxinus latifolia), button willow (Cephalanthus occidentalis), and wild grape (Vitis californica).

Minimization (based on ratios in Table 1):

• Transplant the two elderberry plants that will be affected to the conservation area.

• Plant 40 elderberry rooted cuttings (10 affected stems compensated at 2:1 ratio and 5 affected stems compensated at 4:1 ratio, cuttings planted:stems affected)

• Plant 40 associated native species (ratio of associated natives to elderberry plantings is 1:1 in areas with no exit holes):

5 saplings each of box elder, sycamore, and cottonwood
5 willow seedlings
5 white alder seedlings
5 saplings each of walnut and ash
3 California button willow
2 wild grape vines
Total: 40 associated native species

• Total area required is a minimum of 1,800 sq. ft. for one to five elderberry seedlings and up to 5 associated natives. Since, a total of 80 plants must be planted (40 elderberries and 40 associated natives), a total of 0.33 acre (14,400 square feet) will be required for conservation plantings. The conservation area will be seeded and planted with native grasses and forbs, and closely monitored and maintained throughout the monitoring period.

Example 2
The project will adversely affect beetle habitat in Blue Oak Woodland (Holland 1986). One elderberry plant with at least one stem measuring 1.0 inch or greater in diameter at ground level will be affected by the proposed action. The plant has a total of 10 stems measuring over 1.0 inch. Exit holes were found on the plant. Five of the stems are between 1.0 and 3.0 inches in diameter and five of the stems are between 3.0 and 5.0 inches in diameter. The conservation area is suited for elderberry savanna (non-riparian habitat). Associated natives adjacent to the conservation area are willow (Salix species), blue oak (Quercus douglasii), interior live oak (Q. wislizenii), sycamore, poison oak (Toxicodendron diversilobum), and wild grape.

Minimization (based on ratios in Table 1):

• Transplant the one elderberry plant that will be affected to the conservation area.

• Plant 30 elderberry seedlings (5 affected stems compensated at 2:1 ratio and 5 affected stems compensated at 4:1 ratio, cuttings planted:stems affected)

• Plant 60 associated native species (ratio of associated natives to elderberry plantings is 2:1 in areas with exit holes):

20 saplings of blue oak, 20 saplings of sycamore, and 20 saplings of willow, and seed and plant with a mixture of native grasses and forbs

• Total area required is a minimum of 1,800 sq. ft. for one to five elderberry seedlings and up to 5 associated natives. Since, a total of 90 plants must be planted (30 elderberries and 60 associated natives), a total of 0.37 acre (16,200 square feet) will be required for conservation plantings. The conservation area will be seeded and planted with native grasses and forbs, and closely monitored and maintained throughout the monitoring period.

Conservation Area—Provide Habitat for the Beetle in Perpetuity

The conservation area is distinct from the avoidance area (though the two may adjoin), and serves to receive and protect the transplanted elderberry plants and the elderberry and other native plantings. The Service may accept proposals for off-site conservation areas where appropriate.

1. Size. The conservation area must provide at least 1,800 square feet for each transplanted elderberry plant. As many as 10 conservation plantings (i.e., elderberry cuttings or seedlings and/or associated native plants) may be planted within the 1800 square foot area with each transplanted elderberry. An additional 1,800 square feet shall be provided for every additional 10 conservation plants. Each planting should have its own watering basin measuring approximately three feet in diameter. Watering basins should be constructed with a continuous berm measuring approximately eight inches wide at the base and six inches high.

   The planting density specified above is primarily for riparian forest habitats or other habitats with naturally dense cover. If the conservation area is an open habitat (i.e., elderberry savanna, oak woodland) more area may be needed for the required plantings. Contact the Service for assistance if the above planting recommendations are not appropriate for the proposed conservation area.

   No area to be maintained as a firebreak may be counted as conservation area. Like the avoidance area, the conservation area should connect with adjacent habitat wherever possible, to prevent isolation of beetle populations.

   Depending on adjacent land use, a buffer area may also be needed between the conservation area and the adjacent lands. For example, herbicides and pesticides are

often used on orchards or vineyards. These chemicals may drift or runoff onto the conservation area if an adequate buffer area is not provided.

2. Long-Term Protection. The conservation area must be protected in perpetuity as habitat for the valley elderberry longhorn beetle. A conservation easement or deed restrictions to protect the conservation area must be arranged. Conservation areas may be transferred to a resource agency or appropriate private organization for long-term management. The Service must be provided with a map and written details identifying the conservation area; and the applicant must receive approval from the Service that the conservation area is acceptable prior to initiating the conservation program. A true, recorded copy of the deed transfer, conservation easement, or deed restrictions protecting the conservation area in perpetuity must be provided to the Service before project implementation.

   Adequate funds must be provided to ensure that the conservation area is managed in perpetuity. The applicant must dedicate an endowment fund for this purpose, and designate the party or entity that will be responsible for long-term management of the conservation area. The Service must be provided with written documentation that funding and management of the conservation area (items 3-8 above) will be provided in perpetuity.

3. Weed Control. Weeds and other plants that are not native to the conservation area must be removed at least once a year, or at the discretion of the Service and the California Department of Fish and Game. Mechanical means should be used; herbicides are prohibited unless approved by the Service.

4. Pesticide and Toxicant Control. Measures must be taken to insure that no pesticides, herbicides, fertilizers, or other chemical agents enter the conservation area. No spraying of these agents must be done within one 100 feet of the area, or if they have the potential to drift, flow, or be washed into the area in the opinion of biologists or law enforcement personnel from the Service or the California Department of Fish and Game.

5. Litter Control. No dumping of trash or other material may occur within the conservation area. Any trash or other foreign material found deposited within the conservation area must be removed within 10 working days of discovery.

6. Fencing. Permanent fencing must be placed completely around the conservation area to prevent unauthorized entry by off-road vehicles, equestrians, and other parties that might damage or destroy the habitat of the beetle, unless approved by the Service. The applicant must receive written approval from the Service that the fencing is acceptable prior to initiation of the conservation program. The fence must be maintained in perpetuity, and must be repaired/replaced within 10 working days if it is found to be damaged. Some conservation areas may be made available to the public for appropriate recreational and educational opportunities with written approval from the Service. In

these cases appropriate fencing and signs informing the public of the beetle's threatened status and its natural history and ecology should be used and maintained in perpetuity.

7. Signs. A minimum of two prominent signs must be placed and maintained in perpetuity at the conservation area, unless otherwise approved by the Service. The signs should note that the site is habitat of the federally threatened valley elderberry longhorn beetle and, if appropriate, include information on the beetle's natural history and ecology. The signs must be approved by the Service. The signs must be repaired or replaced within 10 working days if they are found to be damaged or destroyed.

Monitoring

The population of valley elderberry longhorn beetles, the general condition of the conservation area, and the condition of the elderberry and associated native plantings in the conservation area must be monitored over a period of either ten (10) consecutive years or for seven (7) years over a 15-year period. The applicant may elect either 10 years of monitoring, with surveys and reports every year; or 15 years of monitoring, with surveys and reports on years 1, 2, 3, 5, 7, 10, and 15. The conservation plan provided by the applicant must state which monitoring schedule will be followed. No change in monitoring schedule will be accepted after the project is initiated. If conservation planting is done in stages (i.e., not all planting is implemented in the same time period), each stage of conservation planting will have a different start date for the required monitoring time.

Surveys. In any survey year, a minimum of two site visits between February 14 and June 30 of each year must be made by a qualified biologist. Surveys must include:

1. A population census of the adult beetles, including the number of beetles observed, their condition, behavior, and their precise locations. Visual counts must be used; mark-recapture or other methods involving handling or harassment must not be used.

2. A census of beetle exit holes in elderberry stems, noting their precise locations and estimated ages.

3. An evaluation of the elderberry plants and associated native plants on the site, and on the conservation area, if disjunct, including the number of plants, their size and condition.

4. An evaluation of the adequacy of the fencing, signs, and weed control efforts in the avoidance and conservation areas.

5. A general assessment of the habitat, including any real or potential threats to the beetle and its host plants, such as erosion, fire, excessive grazing, off-road vehicle use, vandalism, excessive weed growth, etc.

The materials and methods to be used in the monitoring studies must be reviewed and approved by the Service. All appropriate Federal permits must be obtained prior to initiating the field studies.

Reports. A written report, presenting and analyzing the data from the project monitoring, must be prepared by a qualified biologist in each of the years in which a monitoring survey is required. Copies of the report must be submitted by December 31 of the same year to the Service (Chief of Endangered Species, Sacramento Fish and Wildlife Office), and the Department of Fish and Game (Supervisor, Environmental Services, Department of Fish and Game, 1416 Ninth Street, Sacramento, California 95814; and Staff Zoologist, California Natural Diversity Data Base, Department of Fish and Game, 1220 S Street, Sacramento, California 95814). The report must explicitly address the status and progress of the transplanted and planted elderberry and associated native plants and trees, as well as any failings of the conservation plan and the steps taken to correct them. Any observations of beetles or fresh exit holes must be noted. Copies of original field notes, raw data, and photographs of the conservation area must be included with the report. A vicinity map of the site and maps showing where the individual adult beetles and exit holes were observed must be included. For the elderberry and associated native plants, the survival rate, condition, and size of the plants must be analyzed. Real and likely future threats must be addressed along with suggested remedies and preventative measures (e.g. limiting public access, more frequent removal of invasive non-native vegetation, etc.).

A copy of each monitoring report, along with the original field notes, photographs, correspondence, and all other pertinent material, should be deposited at the California Academy of Sciences (Librarian, California Academy of Sciences, Golden Gate Park, San Francisco, CA 94118) by December 31 of the year that monitoring is done and the report is prepared. The Service's Sacramento Fish and Wildlife Office should be provided with a copy of the receipt from the Academy library acknowledging receipt of the material, or the library catalog number assigned to it.

Access. Biologists and law enforcement personnel from the California Department of Fish and Game and the Service must be given complete access to the project site to monitor transplanting activities. Personnel from both these agencies must be given complete access to the project and the conservation area to monitor the beetle and its habitat in perpetuity.

Success Criteria

A minimum survival rate of at least 60 percent of the elderberry plants and 60 percent of the associated native plants must be maintained throughout the monitoring period. Within one year of discovery that survival has dropped below 60 percent, the applicant must replace failed plantings to bring survival above this level. The Service will make any determination as to the

applicant's replacement responsibilities arising from circumstances beyond its control, such as plants damaged or killed as a result of severe flooding or vandalism.

Service Contact

These guidelines were prepared by the Endangered Species Division of the Service's Sacramento Fish and Wildlife Office. If you have questions regarding these guidelines or to request a copy of the most recent guidelines, telephone (916) 414-6600, or write to:

U.S. Fish and Wildlife Service
Ecological Services
2800 Cottage Way, W-2605
Sacramento, CA 95825

Figure 1: Range of the Valley Elderberry Longhorn Beetle

Literature Cited

Barr, C. B. 1991. The distribution, habitat, and status of the valley elderberry longhorn beetle Desmocerus californicus dimorphus. U.S. Fish and Wildlife Service; Sacramento, California.

Holland, R.F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished Report. State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California.

USFWS. 1980. Listing the valley elderberry longhorn beetle as a threatened species with critical habitat. Federal Register 45:52803-52807.

USFWS. 1984. Recovery plan for the valley elderberry longhorn beetle. U.S. Fish and Wildlife Service, Endangered Species Program; Portland, Oregon.

Table 1: Minimization ratios based on location (riparian vs. non-riparian), stem diameter of affected elderberry plants at ground level, and presence or absence of exit holes.

Location	Stems (maximum diameter at ground level)	Exit Holes on Shrub Y/N (quantify)[1]	Elderberry Seedling Ratio[2]	Associated Native Plant Ratio[3]
non-riparian	stems > = 1" & = < 3"	No:	1:1	1:1
		Yes:	2:1	2:1
non-riparian	stems > 3" & < 5"	No:	2:1	1:1
		Yes:	4:1	2:1
non-riparian	stems >= 5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems > = 1" & = < 3"	No:	2:1	1:1
		Yes:	4:1	2:1
riparian	stems > 3" & < 5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems > = 5"	No:	4:1	1:1
		Yes:	8:1	2:1

[1] All stems measuring one inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

[2] Ratios in the *Elderberry Seedling Ratio* column correspond to the number of cuttings or seedlings to be planted per elderberry stem (one inch or greater in diameter at ground level) affected by a project.

[3] Ratios in the *Associated Native Plant Ratio* column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

APPENDIX E: U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

U.S. FISH AND WILDLIFE SERVICE STANDARDIZED RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process. All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to an6y survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied and unoccupied)	Service must be contacted

*Known den: To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

**Potential and Atypical dens: Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection. **Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service**.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities. **The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.**

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.

2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.

3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe

may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.

5. No firearms shall be allowed on the project site.

6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.

7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.

8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.

9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.

10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is

disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.

12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.

13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.

14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT "A" - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

APPENDIX F: TULARE COUNTY GENERAL PLAN POLICIES

the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region.

The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. By 1900, Tulare County boasted a population of about 18,000. New transportation links such as SR 99 (completed during the 1950s), affordable housing, light industry, and agricultural commerce brought steady growth to the valley. The U.S. Census Bureau estimated the 2003 Tulare County population to be 390,791.

8.1 Biological Resources

ERM-1 To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County. [*New Goal]*

ERM-1.1 Protection of Rare and Endangered Species

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. [*New Policy based on ERME IV-C; Biological Resources; Issue 12, and ERME; Pg 32*]

ERM-1.2 Development in Environmentally Sensitive Areas

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. [*New Policy based on EMRE; Water; Issue 3; Recommendation 3, ERME; Pg 28]*

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in areas with moderate to high potential for sensitive habitat. [*New Policy*]

ERM-1.4 Protect Riparian Areas

The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls. [*New Policy*]

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans include measures to protect, maintain and restore riparian resources and habitats. [*New Policy*]

ERM-1.6 Management of Wetlands

The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats. [*New Policy*]

ERM-1.7 Planting of Native Vegetation

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. [*New Policy*]

ERM-1.8 Open Space Buffers

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. [*New Policy based on EMRE policies*]

ERM-1.9 Coordination of Management on Adjacent Lands

The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources while maintaining the ability to utilize and enjoy the natural resources in the County. [*New Policy*]

ERM-1.10 Appropriate Access for Recreation
The County shall encourage appropriate access to resource-managed lands. [*New Policy*]

ERM-1.11 Hunting and Fishing
The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code. [*New Policy*]

ERM-1.12 Management of Oak Woodland Communities
The County shall support the conservation and management of oak woodland communities and their habitats. [*New Policy*]

ERM-1.13 Pesticides
The Tulare County Agricultural Commissioner/Sealer will cooperate with State and federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural resources. *[ERME IV-C; Pesticides; Recommandation 1] [ERME; Pg 131, Modified*]

ERM-1.14, Mitigation and Conservation Banking Program
The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process. [*New Policy*]

8.2 Mineral Resources - Surface Mining

ERM-2 To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values. [*New Goal based on MRPAC June 28, 2006*]

ERM-2.1 Conserve Mineral Deposits
Emphasize the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate. [*MRPAC June 28, 2006*]

ERM-2.2 Recognize Mineral Deposits
Recognize as a part of the General Plan those areas which have identified and/or potential mineral deposits. [*MRPAC June 28, 2006*]

ERM-2.3 Future Resource Development
Provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County. [*MRPAC June 28, 2006*]

ERM-2.4 Identify New Resources
Encourage exploration, evaluation, identification, and development of previously unrecognized but potentially significant hard rock resources for production of crushed stone aggregate. [*MRPAC June 28, 2006*]

ERM-2.5 Resources Development
The County will promote the responsible development of identified and/or potential mineral deposits. [*MRPAC June 28, 2006*]

ERM-2.6 Streamline Process
Create a streamlined and timely permitting process for the mining industry, which will help encourage long-range planning and the reasonable amortization of investments. [*MRPAC June 28, 2006*]

ERM-2.8 Minimize Adverse Impacts
Minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological and aesthetic factors. [*MRPAC June 28, 2006*]

ERM-2.9 Minimize Hazards and Nuisances
Minimize the hazards and nuisances to persons and properties in the area during extraction, processing and reclamation operations. [*MRPAC June 28, 2006*]

ERM-2.10 Compatibility
Develop mineral deposits in a manner compatible with surrounding land uses. [*MRPAC June 28, 2006*]

ERM-2.11 Incompatible Development
Proposed incompatible land uses shall not be on lands containing, or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted. [*MRPAC June 28, 2006*]

ERM-2.12 Conditions of Approval
Procedures shall be established to ensure compliance with conditions of approval on all active and idle mines. [*MRPAC June 28, 2006*]

ERM-2.13 Approved Limits
Procedures shall be established to ensure that vested interest mining operations remain within their approved area and/or production limits. [*MRPAC June 28, 2006*]

ERM-2.14 SMARA Requirements
All surface mines, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [*MRPAC June 28, 2006*]

8.3 Mineral Resources

ERM-3 To protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment. [*ERME IV-B; Land; Issue 8*] [ERME; Pg 30, *Modified*]

ERM-3.1 Environmental Contamination
All mining operations shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site. [*New Policy*]

ERM-3.2 Limited In-City Mining
Within UDBs, new commercial mining operations should be limited due to environmental and compatibility concerns. [*New Policy*]

ERM-3.3 Small-Scale Oil and Gas Extraction
The County shall permit by special use permit small-scale oil and gas extraction activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land and are within an established oil and gas field outside of a UDB. [*New Policy*]

ERM-3.4 Oil and Gas Extraction
Facilities related to oil and gas extraction and processing may be allowed in identified oil and gas fields subject to a special use permit. The extraction shall demonstrate that it will be compatible with surrounding land uses and land use designations. [*New Policy*]

ERM-3.5 Reclamation of Oil and Gas Sites
The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan. Reclamation costs shall be born by the mine operator, and guaranteed by financial assurances set aside for restoration procedures. [*New Policy, MRPAC Goals, Policies, Implementation Measures, and Development Standards, Goal F and associated policies*]

8.4 Energy Resources

ERM-4 To encourage energy conservation in new and existing developments throughout the County. [*New Goal*]

ERM-4.1 Energy Conservation and Efficiency Measures
The County shall encourage the use of solar energy, solar hot water panels, and other energy conservation and efficiency features in new

APPENDIX C

CULTURAL AND TRIBAL CULTURAL RESOURCES

CHRIS RECORDS SEARCH

California Historical Resources Information System

Fresno
Kern
Kings
Madera
Tulare

Southern San Joaquin Valley Information Center
California State University, Bakersfield
Mail Stop: 72 DOB
9001 Stockdale Highway
Bakersfield, California 93311-1022
(661) 654-2289
E-mail: ssjvic@csub.edu
Website: www.csub.edu/ssjvic

To: Hector Guerra
Tulare County Resource Management Agency
5961 South Mooney Blvd.
Visalia, CA 93277

Record Search 17-398

Date: August 21, 2017

Re: Traver Community Wastewater System Improvements Project

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 (3/18/13), 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 THE ONE-HALF MILE RADIUS

According to the information in our files, there have been seven previous cultural resource studies conducted within the project area, TU-00102, 00504, 01008, 01106, 01158, 01324, and 01751. There have been no additional studies conducted within the one-half mile radius.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND THE ONE-HALF MILE RADIUS

There are two recorded cultural resources within the project area, P-54-002171 and P-54-004626. There are two recorded resources within the one-half mile radius, P-54-002170 and P-54-002172. These resources consist of Traver Canal, Banks Ditch, Southern Pacific/San Joaquin Railroad, and an historic era road.

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 improvements to the existing wastewater collection system and wastewater treatment plant. Further, project activities appear to take place along existing road ways and within the existing wastewater treatment plant. We recommend all vacant land impacted by this project be surveyed by a qualified, professional archaeologist prior to ground disturbance activities to determine if cultural resources are present. Please note that agriculture does not constitute development, as it does not destroy cultural resources, but merely moves them around within the plow zone. Further, if this project will impact any structures more than 45 years old, we recommend they first be formally recorded and evaluated for historical significance by a qualified, professional architectural historian. If project activities will not take place on any vacant land and no structures more than 45 years old will be impacted, then no further cultural resource investigation is recommended at this time. However, if cultural resources are unearthed during ground disturbance activities, all work must halt in the area of the find and a qualified, professional archaeologist should be called out to assess the findings and make the appropriate mitigation recommendations. A list of professionals can be found at 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:** August 21, 2017

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

SLF SEARCH

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX

August 18, 2017

Jessica Willis
Tulare County Resource Management Agency

Sent Via Email: jwillis@co.tulare.ca.us

RE: Traver Community Wastewater System Improvements, Traver, Tulare County

Dear Ms. Willis:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent above reference codes is to avoid and or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects.

As of July 1, 2015, Public Resources Code Sections 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

> Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.3.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.3.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
   - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

   - Any report that may contain site forms, site significance, and suggested mitigation measurers.

     All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A search of the SFL was completed for the USGS quadrangle information provided with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. **A tribe may be the only source of information regarding the existence of a tribal cultural resource.**

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: Sharaya.souza@nahc.ca.gov

Sincerely,

Sharaya Souza
Staff Services Analyst

Native American Heritage Commission
Native American Contacts
8/18/2017

Kern Valley Indian Council
Julie Turner, Secretary
P.O. Box 1010
Lake Isabella , CA 93240
Tsnungwe
Tubatulabal
Koso

(661) 340-0032 Cell

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas , CA 93906
kwood8934@aol.com
Foothill Yokuts
Mono
Wuksache

(831) 443-9702

Kern Valley Indian Council
Robert Robinson, Chairperson
P.O. Box 401
Weldon , CA 93283
brobinson@iwvisp.com
Tubatulabal
Kawaiisu
Koso

(760) 378-2915 Home
(760) 378-2915 Cell

Santa Rosa Indian Community of the Santa Rosa Rancheria
Rueben Barrios Sr., Chairperson
P.O. Box 8
Lemoore , CA 93245
Tache
Tachi
Yokut

(559) 924-1278

(559) 924-3583 Fax

Tubatulabals of Kern Valley
Robert L. Gomez, Jr., Tribal Chairperson
P.O. Box 226
Lake Isabella , CA 93240
Tubatulabal

(760) 379-4590

(760) 379-4592 Fax

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589
Porterville , CA 93258
chairman@tulerivertribe-nsn.gov
Yokuts

(559) 781-4271

(559) 781-4610 Fax

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 Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the proposed Traver Community Wastewater System Improvements, Traver, Tulare County.

CULTURAL RESOURCES ASSESSMENT

CULTURAL RESOURCES ASSESSMENT, PROPOSED PLANNING STUDY AREA FOR THE TRAVER COMMUNITY PLAN UPDATE, TULARE COUNTY, CALIFORNIA.

Prepared for:

Ms. Rebekah Jensen
Assistant Project Manager
Live Oak, Inc.
P.O. Box 2697
Oakhurst, CA 93644
(559) 642-4880

Prepared by:

C. Kristina Roper, M.A., RPA
Sierra Valley Cultural Planning
41845 Sierra Avenue
Three Rivers, California 93271
(559) 561-3816

June 2014

Topographic Quadrangle: Traver, 7.5' (1971)
Area: ~640 acres (259 hectares)

(Keywords: *Tulare, Township 17S, Range 23E, Nutunutu Yokuts, '76 Land and Water Company, Charles Traver, Alta Irrigation District)*

INTRODUCTION

The County of Tulare is updating the Traver Community Plan and has requested that a cultural resources assessment be completed for the proposed planning study area. Provisions and implementing guidelines of the CEQA, as amended March 18, 2010, state that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which include cultural resources.

This report presents the findings of a records search and windshield survey of the Traver Planning Area, and identification of potential cultural resources constraints on future development. The study area includes approximately 640 acres (259 hectares) and is located in northwest Tulare County along State Route 99, approximately 6 miles south of the Fresno/Tulare County boundary (Maps 1 and 2).

The study was completed by the Sierra Valley Cultural Planning (SVCP) Principal Investigator C. Kristina Roper. Ms. Roper has over 33 years of professional experience in the field of archaeology, historical research, specifically in the investigation and management of cultural resources within the context of local, state and federal regulatory compliance for projects in the Far West. Ms. Roper holds a Master's degree in Cultural Resources Management awarded in 1993 from Sonoma State University, and is certified as a Registered Professional Archaeologist.

REGULATORY FRAMEWORK

CEQA requires consideration of project impacts on archaeological or historical sites deemed to be "historical resources." Under CEQA, a substantial adverse change in the significant qualities of a historical resource is considered a significant effect on the environment. For the purposes of CEQA, a "historical resource" is a resource listed in, or determined to be eligible for listing in, the CR (Title 14 CCR §15064.5(a)(1)-(3)). Historical resources may include, but are not limited to, "any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (PRC §5020.1(j)).

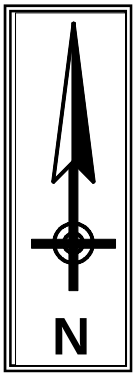
The eligibility criteria for the CR are the definitive criteria for assessing the significance of historical resources for the purposes of CEQA (Office of Historic Preservation n.d.). Generally, a resource is considered "historically significant" if it meets one or more of the following criteria for listing on the CR:

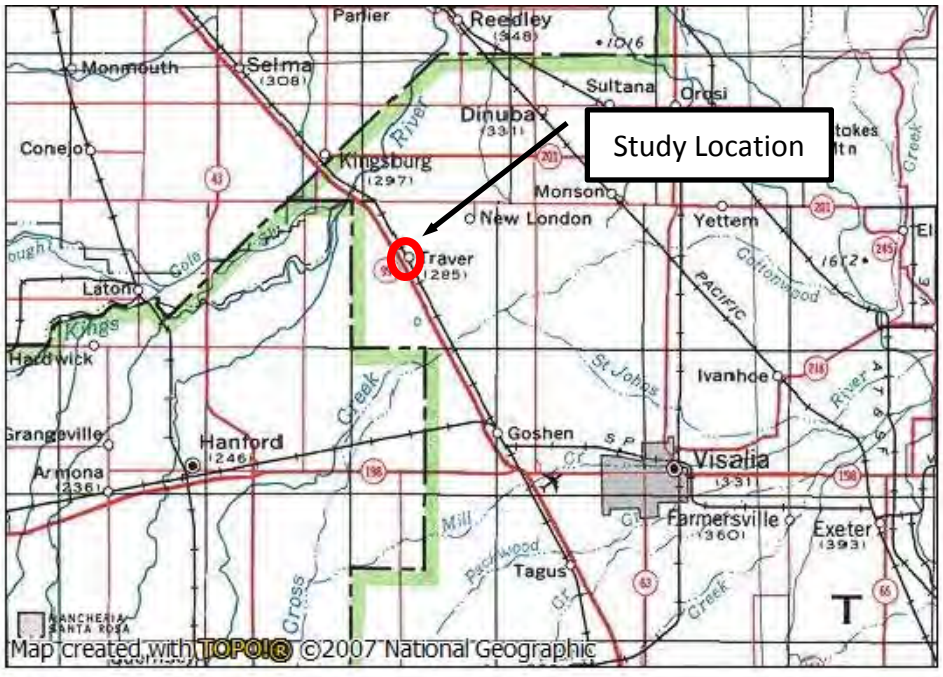
(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c)).

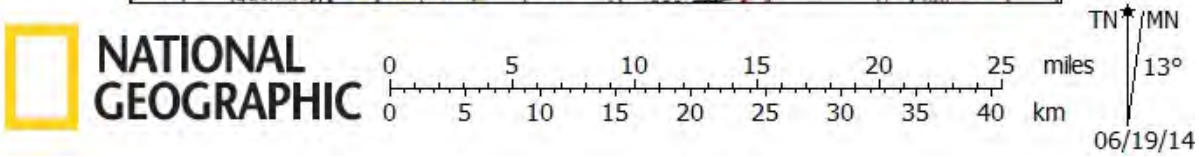
MAP 1. STUDY VICINITY

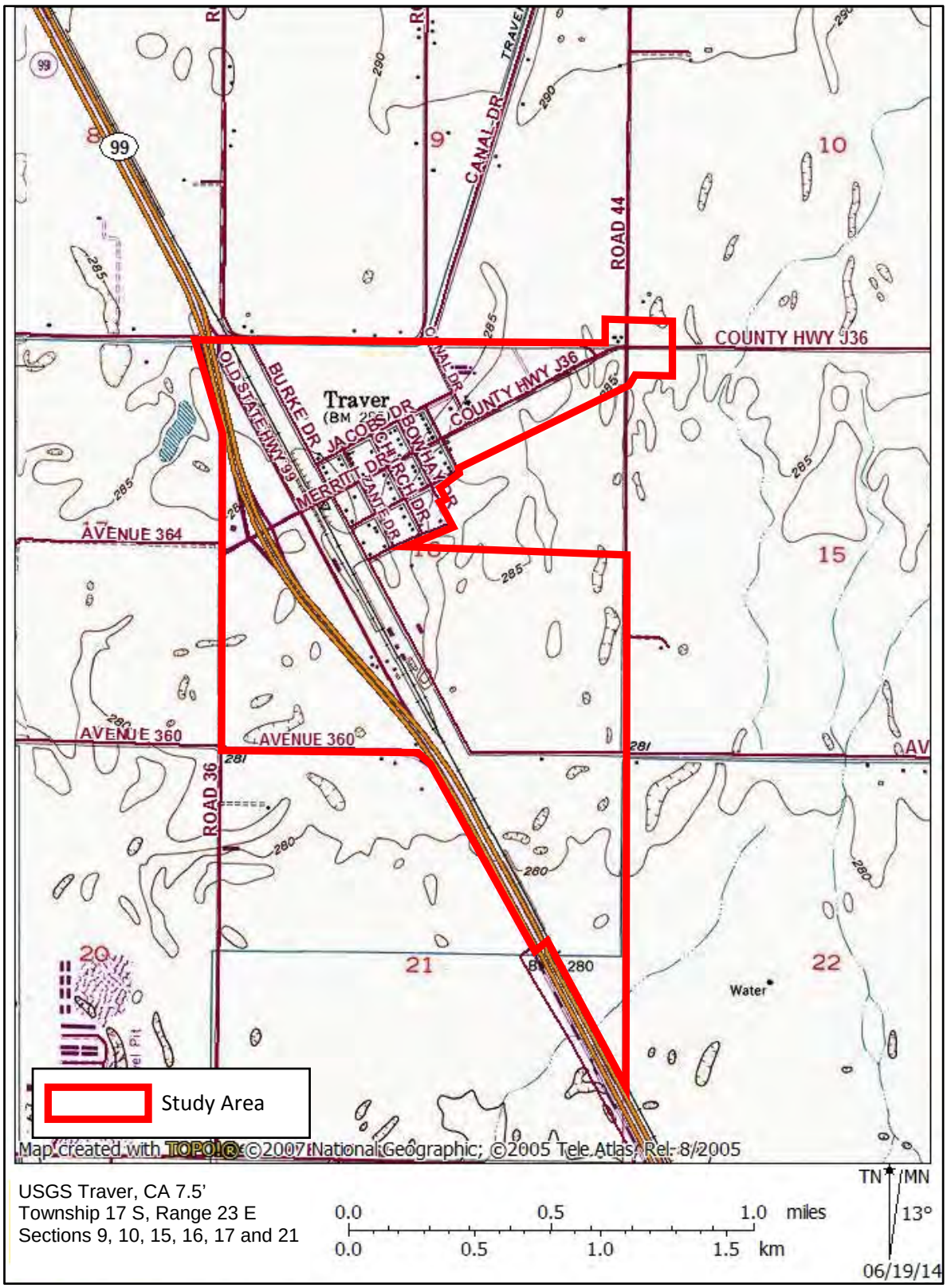
Traver Community Plan Update:
Cultural Resources

County of Tulare









Map 2. Traver Planning Study Area.

BACKGROUND

Prior to EuroAmerican exploration and settlement in the region, the central San Joaquin Valley was extensive grassland covered with spring-flowering herbs. Stands of trees -- sycamore, cottonwoods, box elders and willows -- lined the stream and river courses with groves of valley oaks in well-watered localities with rich soil. Rivers yielded fish, mussels, and pond turtles; migratory waterfowl nested in the dense tules along the river sloughs downstream. When the Spanish first set foot in the area, they found the deer and tule elk trails to be so broad and extensive that they first supposed that the area was occupied by cattle. Grizzly bears occupied the open grassland and riparian corridors on the valley floor and adjacent foothills. Smaller mammals and birds, including jackrabbits, ground squirrels, and quail were abundant. Native Americans occupants of the region describe abundant sedge beds, along with rich areas of deer grass, plants that figure prominently in the construction of Native American basketry items.

Prehistoric Period Summary

The San Joaquin Valley and adjacent Sierran foothills and Coast Range have a long and complex cultural history with distinct regional patterns that extend back more than 11,000 years (McGuire 1995). The first generally agreed-upon evidence for the presence of prehistoric peoples in the region is represented by the distinctive basally-thinned and fluted projectile points, found on the margins of extinct lakes in the San Joaquin Valley. These projectiles, often compared to Clovis points, have been found at three localities in the San Joaquin Valley including along the Pleistocene shorelines of former Tulare Lake. Based on evidence from these sites and other well-dated contexts elsewhere, these Paleo-Indian hunters who used these spear points existed during a narrow time range of 11550 cal B.C. to 8550 cal B.C. (Rosenthal et al. 2007).

As a result of climate change at the end of the Pleistocene, a period of extensive deposition occurred throughout the lowlands of central California, burying many older landforms and providing a distinct break between Pleistocene and subsequent occupations during the Holocene. Another period of deposition, also a product of climate change, had similar results around 7550 cal B.C., burying some of the oldest archaeological deposits discovered in California (Rosenthal and Meyer 2004).

The Lower Archaic (8550-5550 cal B.C.) is characterized by an apparent contrast in economies, although it is possible they may be seasonal expressions of the same economy. Archaeological deposits which date to this period on the valley floor frequently include only large stemmed spear points, suggesting an emphasis on large game such as artiodactyls (Wallace 1991). Recent discoveries in the adjacent Sierra Nevada have yielded distinct milling assemblages which clearly indicate a reliance on plant foods. Investigations at Copperopolis (LaJeunesse and Pryor 1996) argue that nut crops were the primary target of seasonal plant exploitation. Assemblages at these foothill sites include dense accumulations of handstones, millingslabs, and various cobble-core tools, representing “frequently visited camps in a seasonally structured settlement system” (Rosenthal et al. 2007:152). During the Lower Archaic, regional interaction spheres were well established. Marine shell from the central California coast has been found in early Holocene contexts in the Great Basin east of the Sierra Nevada, and eastern Sierra obsidian comprises a large percentage of flaked stone debitage and tools recovered from sites on both sides of the Sierra (Rosenthal et al. 2007:152).

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to nut and seed gathering, as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace 1954, 1978a), but recent studies suggest that the horizon may be more widespread than originally described and is found throughout the central region during the Middle Archaic Period. Dates

associated with this period vary between 9,000 and 2,000 cal BP, although most cluster in the 6,800 to 4,500 cal BP range (Basgall and True 1985).

On the valley floor, early Middle Archaic sites are relatively rare; this changes significantly toward the end of the Middle Archaic. In central California late Middle Archaic settlement focused on river courses on the valley floor. “Extended residential settlement at these sites is indicated by refined and specialized tool assemblages and features, a wide range of nonutilitarian artifacts, abundant trade objects, and plant and animal remains indicative of year-round occupation” (Rosenthal et al. 2007:154). Again, climate change apparently influence this shift, with warmer, drier conditions prevailing throughout California. The shorelines of many lakes, including Tulare Lake, contracted substantially, while at the same time rising sea levels favored the expansion of the San Joaquin/Sacramento Delta region, with newly formed wetlands extending eastward from the San Francisco Bay.

In contrast with rare early Middle Archaic sites on the valley floor, early Middle Archaic sites are relatively common in the Sierran foothills, and their recovered, mainly utilitarian assemblages show relatively little change from the preceding period with a continued emphasis on acorns and pine nuts. Few bone or shell artifacts, beads, or ornaments have been recovered from these localities. Projectile points from this period reflect a high degree of regional morphological variability, with an emphasis on local toolstone material supplemented with a small amount of obsidian from eastern sources. In contrast with the more elaborate mortuary assemblages and extended burial mode documented at Valley sites, burials sites documented at some foothill sites such as CA-FRE-61 on Wahtoke Creek are reminiscent of “re-burial” features reported from Milling Stone Horizon sites in southern California. These re-burials are characterized by re-interment of incomplete skeletons often capped with inverted millingstones (McGuire 1995:57).

A return to colder and wetter conditions marked the Upper Archaic in Central California (550 cal B.C. to cal A.D. 1100). Previously desiccated lakes returned to spill levels and increased freshwater flowed in the San Joaquin and Sacramento watershed. Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, emerged during this period. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and valley populations expanded into the lower Sierran foothills. New and specialized technologies expanded and distinct shell bead types occurred across the region. The range of subsistence resources utilized and exchange systems expanded significantly from the previous period. In the Central Valley, archaeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items.

The period between approximately cal A.D. 1000 and Euro-American contact is referred to as the Emergent Period. The Emergent Period is marked by the introduction of bow and arrow technology which replaced the dart and atlatl at about cal A.D. 1000 and 1300. In the San Joaquin region, villages and small residential sites developed along the many stream courses in the lower foothills and along the river channels and sloughs of the valley floor. A local form of pottery was developed in the southern Sierran foothills along the Kaweah River. While many sites with rich archaeological assemblages have been documented in the northern Central Valley, relatively few sites have been documented from this period in the southern Sierran foothills and adjacent valley floor, despite the fact that the ethnographic record suggests dense populations for this region.

Ethnographic Summary

Prior to EuroAmerican settlement, most of the San Joaquin Valley and the bordering foothills of the Sierra Nevada were inhabited by speakers of Yokutsan languages. The present study area falls within the easternmost area of the *Nutunutu* Yokuts territory. The *Nutunutu*

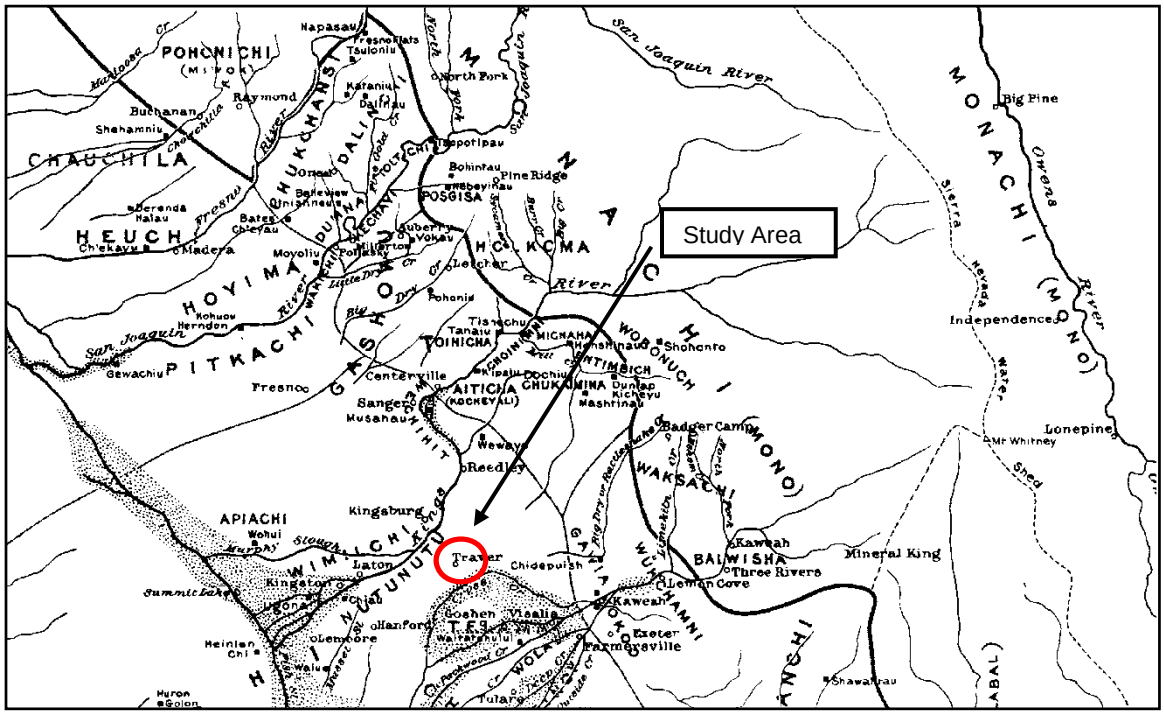


Figure 1. *Nutunutu* Territory relative to the Study Area (Kroeber 1925).

Yokuts occupied the area south of lower Kings River west of the study area, in a country formerly a mass of sloughs and swamps (Kroeber 1925:483).

Due to the abundance and diversity of wildlife habitats and plant communities within the Sierran foothills and nearby San Joaquin Valley and higher elevations of the Sierra Nevada, Native American population densities in the region were quite high (Baumhoff 1963). While the acorn was the dietary staple, the diversity of accessible natural resources provided an omnivorous diet. The reader is referred to Gayton (1948), Kroeber (1925), Latta (1999), and Wallace (1978b) for additional information on pre-contact Yokuts subsistence and culture. Figure 1 depicts the territory of the location of *Nutunutu* Yokut relative to the study area.

Historic Period Summary

The San Joaquin Valley was visited in the early 1800s by Spanish expeditions exploring the interior in search of potential mission sites. One of the earliest Americans to explore the Tulare area was Jedediah Strong Smith in 1826-27. In 1832-33 Colonel Jose J. Warner, a member of the Ewing-Young trapping expedition, passed through the San Joaquin Valley. Warner described Native villages densely packed along the valley waterways, from the foothills down into the slough area. The next year he revisited the area following a devastating malaria epidemic. Whereas the previous year the region had been densely occupied by Native peoples, during this trip not more than five Indians were observed between the head of the Sacramento Valley and the Kings River (Cook 1955).

EuroAmerican appreciation for the land did not include acceptance of its indigenous human populations, and pressure was exerted upon the US military to remove the Native population from the region, leaving the region open for American settlement and resource development. EuroAmerican settlement of the region began in 1851 with the establishment of Fort Miller on the San Joaquin River. Hostilities between Native inhabitants and American settlers

initially prevented widespread settlement of the region; however, by 1860 such threats had been reduced and settlers began taking up large tracts in the region.

In late 1849 or early 1850, a party under the leadership of John Wood settled on the south bank of the Kaweah River, about seven miles east of the present city of Visalia (Hoover et al. 1990:508). In April, 1852, Tulare County was created, with the county seat initially located at Woodsville. In 1853 the county seat was removed to Fort Visalia, located in the area bounded by Oak, Center, Garden and Bridge streets.

Many of the early EuroAmerican settlers in the region were successful gold miners, eager to settle in this new land and reinvest their profits. The earliest economic development of the area focused on cattle. Miller and Lux, the cattle kings, claimed ownership to hundreds of thousands of acres in the San Joaquin Valley. Agriculture, particularly winter wheat cultivation, gained importance following passage of the "No Fence" law of 1874 (Clough 1996:29). Crop production later shifted to orchard and vineyard crops, particularly oranges.

Conflicts between ranchers and farmers over water rights led to the passage of the Wright Act in 1887 (JRP 2000). The Wright Act enabled the creation of irrigation districts within the state. These districts were often controlled by large land owners and provided little relief to small farm owners. Later in the 1930s, state and federal government took on a much larger role in providing reliable water conveyance. In 1933 California voters approved the Central Valley Project, which called for construction of a huge system of canals and dams/reservoirs throughout the state. In 1935 the Federal government released funds for construction of the project, and two years later the U.S. Bureau of Reclamation was given authority to take over the project (JRP 2000:74). The Friant-Kern Canal was authorized for construction by Congress in the Central Valley Project Act of 1937, and the canal was built between 1945 and 1951. The Friant-Kern Canal conveys water from Lake Millerton to Bakersfield, covering a distance of 152 miles.

The following description of the history of Traver is taken directly from Hoover et al. *Historic Spots in California* (1990:512-513):

> *The traveler through the mining districts of California often comes upon ghost towns, tiny settlements that thrived for a few months or years before meeting an early death. A rare example of such a place in an agricultural region is Traver, some sixteen miles north of Tulare on SR 99.*
>
> *For intensive agriculture, is was realized, the San Joaquin Valley had to depend on irrigation. In 1882 Peter Y. Baker, a civil engineer, conceived the idea of a large irrigation project that would furnish water to some 130,000 acres of land on the south side of the Kings River in both Tulare and Fresno counties. Enough investors participated in the project to allow the newly formed corporation to acquire 30,000 acres. The corporation was called the 76 Land and Water Company, after the cattle brand of Senator Thomas Fowler, owner of part of the new holding and a principal stockholder. The main settlement of the project was named after Charles Traver, company director. The 76 or Alta Canal was built to bring water into this hitherto unplanted area, and the townsite was platted while railroads offered excursion rates to bring prospective settlers to the area.*
>
> *After some initial setbacks, Traver was soon in full swing. Annie Mitchel continues the story: "When the first contingent of buyers arrived on April 4, 1884, water was flowing through the canal. On that auspicious day the depot was the only completely finished building, but by the end of the days buyers had invested $65,000. Two months later Traver had two general stores, a drug store, a hardware*

store, two lumber yards, two hotels, two barber shops, two livery stables, three saloons, a postoffice, a school, an express office, a large Chinatown and a lively red light district.

"Fruit, grapes, vegetables and alfalfa did well, but basically Traver was a storage and shipping point for grain. Each of three warehouses held 30,000 tons of sacked grains. Most of the time they were filled and sacks of grains were piled outside and along the railroad right of way. Teamsters waited hours and even days to upload their wagons. By 1886 Traver was one of the largest grain shipping towns in the nation." Since the Bonanza gold rush days, very few California towns had boasted such rapid growth and apparent prosperity.

By a terrible irony, Traver was already beginning to die in the middle of this boom; in Annie Mitchell's words, "Traver was ruined by the same thing that created it – water." The soil was highly alkaline, and as intensive irrigation brought the alkali to the surface, virtually all of the plants were destroyed. Like a blight, the alkali spread until the fertile fields were a desert plain. At the same time, the railroad opened a new line on the eastern side of the valley, developing the new towns of Dinuba and Reedley. And in 1887 Traver experienced the first of five fires that discouraged settlers from remaining.

The removal of the Alta Irrigation District from Traver to Dinuba early in 1897 was the final blow to Traver's prosperity. Trade dropped off and the population decreased, many of the inhabitants moving to Dinuba or Reedley. "Many residences and one or more grain warehouses were moved over to the growing cities east of Traver, and the once prosperous, thriving community gradually settled into the state in which is exists today, a sleepy village with a few scattered buildings" (Small 1926:193).

In 2010 the population of Traver was noted as 713. The majority of residences are single family homes. A few buildings date to the early/middle1900s, although the vast majority of constructions appears to date to post 1960. Little above-ground evidence remains of the boom period of the late 1880s.

EXISTING RESOURCES

Records Search Results

Prior to a windshield survey of the study area, a records search was conducted by the author at the Southern San Joaquin Valley Information Center of the California Historical Resources Information System at CSU Bakersfield to identify areas previously surveyed and identify known cultural resources present within or in close proximity to the study area. Two previously recorded historic-period sites have been recorded within the study area; two additional historic-period sites have been identified within one-half mile of the study area (Map 3).

There are no other resources within or in the immediate vicinity of the study area that are listed on the National Register of Historic Places, the California Register of Historic Resources, California Points of Historical Interest, State Historic Landmarks, or the California Inventory of Historic Resources.

Six cultural resources surveys have been completed within the study area; an additional study has been completed within one-mile of the study area (Map 4). All records search materials are included as Attachment A.

Cultural Resource Identification within the Traver Planning Study Area

Based on current information, there are two known cultural resource sites within or immediately adjacent to the study area. These include two non-Native American historic-era sites (See Map 3). No Native American resources have been identified within or in close proximity to the study.

P-54-002171

This resource includes an earthen canal flowing in an east/west direction. A wood and steel railroad trestle supports the railroad crossing over the canal. The canal feature is part of the historic 76 Canal built by the 76 Land and Water Company (now known as the raver Canal, part of the Alta Irrigation District) and is associated with agricultural development of the region. The resource was recorded in 1995 as part of the Santa Fe Pacific Pipeline Concord to Colton Project by William Self Associates.

P-54-002172

This resource includes two railroad spurs, a concrete reinforced 3-pipe culvert, a concrete railroad bridge, and an earthen canal. The earthen canal, identified as Banks Ditch on the Traver. CA, 7.5' topographic map, flows in an east/west direction under the railroad tracks and Highway 99, and is associated with agriculture, specifically vineyards and orchards. The resource was recorded in 1995 as part of the Santa Fe Pacific Pipeline Concord to Colton Project by William Self Associates.

Cultural Resources Identified Near the Traver Planning Study Area

P-54-002170

This site includes a small portion of old blacktop road, possibly a remnant of what is identified as an "old homestead road" on an historic topographic map.

P-54-004829

This site consist of a disturbed scatter of historic-era artifacts and a stand of non-native trees. The artifacts include clear, brown, green, cobalt and light blue glass; white improved earthenware; orange, turquoise, lime green, and blue ceramics; milk glass including canning jar lids and cold cream jars; decorated ceramics including several pieces with Chinese designs; a brick fragment, a shell button, and a glass marble. Non-native landscaping includes a Tree of Heaven. The site is highly disturbed due to agricultural disking.

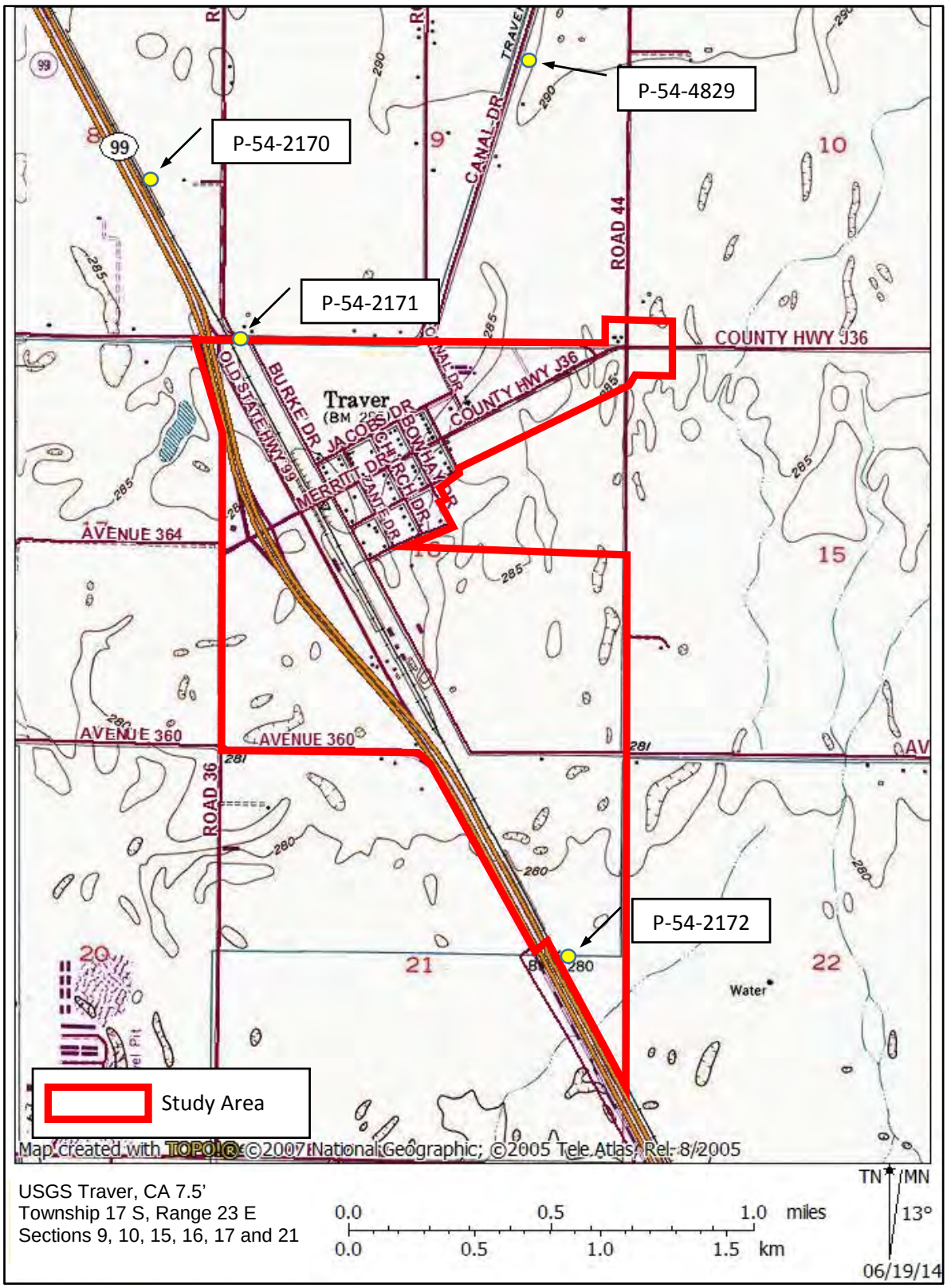
Previous Cultural Resource Investigations within the Study Area

Six cultural resource studies have been completed within the study area. One study has been completed within one-mile radius of the study area.

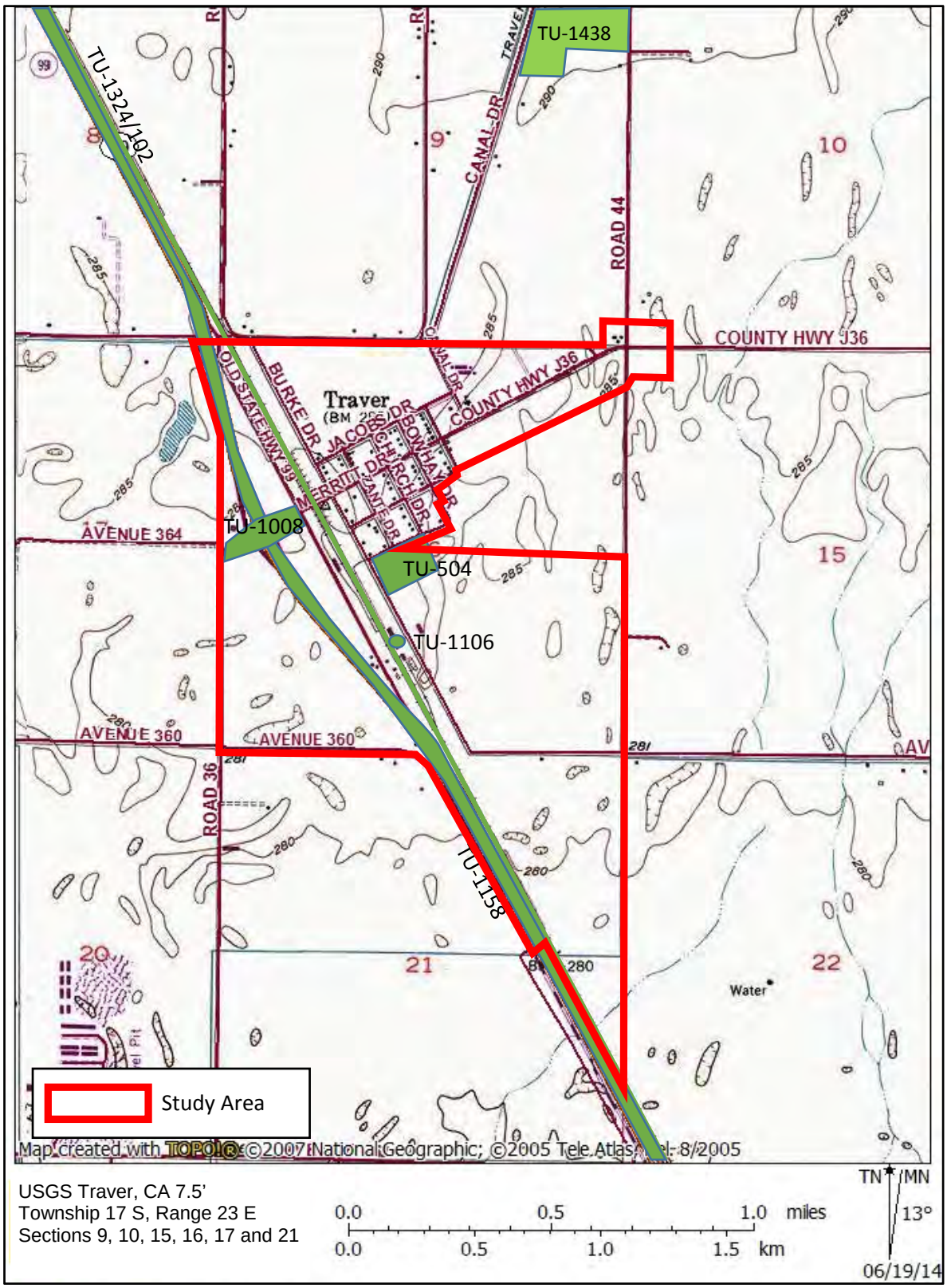
In 1978 an archaeological survey was completed of the proposed Traver Elementary School-Community Park (TU-504). The study was completed my Michael E. Thornton, Archaeologist with the Laboratory of Archaeology/Cultural Resources Facility at CSU Fresno. No resources were identified.

In 1995 Woodward-Clyde Consultants completed their report of a cultural resources inventory for the proposed Mojave Northward Expansion Project (TU-102). The survey route was along the existing railroad tracks which parallel State Route 99 on the east. Three historic-period resources were identified within the project area (P-54-002171 and -002172; see above). A third site was recorded north of the study area (P-54-002170).

In 1999 Caltrans District 6 Archaeologist Kevin Hovey completed an archaeological survey of the area of potential impact associated with the upgrade of bridge rails on the Merritt Avenue Overcrossing on State Route 99 (Bridge 46-0176; TU-1008). No resources were identified.



Map 3. Cultural Resources Identified within the Traver Planning Study Area Vicinity.



Map 4. Cultural Resource Studies completed within the Traver Planning Study Area Vicinity.

In 2000 EarthTouch LLC Historic Archaeologist Lorna Billat completed a cultural resources study of a Nextel Communications Wireless Telecommunications Service Facility located on Clarkson south of Traver (TU-1106). No resources were identified.

In 2003 an archaeological survey was completed of the Goshen/Kingsburg Six-Lane Project on State Route 99 (TU-1158). No resources were identified within or in close proximity as a result of this survey.

In 2010 Three Girls and a Shovel, LLC, recorded an historic-period artifact scatter (P-54-004829; see above) during a cultural resources assessment for the Groundwater Recharge and Banking Project northeast of Traver. The survey area included a portion of the Traver Canal which runs along Canal Drive. No report is on file at the Information Center other than the site record noted above.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted on 1 June 2014 in order to determine whether Native American sacred sites have been identified either within or in close proximity to the study area. The request was resent on June 16, 2014. No response has been received to date.

Windshield Survey of the Study Area

On June 12 the author completed a windshield survey of the study area to field check previously recorded resources and identify any structures and/or other features which may be eligible for listing in the California Register of Historic Resources. As noted above, very few structures appear to date to the period prior to 1960, and many of these have been modified to include additions, aluminum windows, and other more modern features. Several structures, however, appear to date to the early 1900s and appear relatively unmodified. Examples are located at 36617 Burke and 36661 Baker. A red barn which appears to date to the early 1900s is located on Bullard west of Zante (see Figures 2a-c). Commercial and industrial structures all appear to be modern in construction.

Canal features are present within the study area; at least one canal follows the historic path of the ’76 Canal constructed in the 1880s.

OPPORTUNITIES AND CONSTRAINTS WITH RECOMMENDATIONS

Cultural resources consist of significant and potentially significant prehistoric and ethnographic sites, historic and ethnographic resources, cultural material collections, and cultural landscapes. As noted above, based on current information, there are two known cultural resources sites within or adjacent to the Traver Planning Study Area. In addition to these a resources, a number of historic-era structures (older than 50 years in age) exist in the study area but have not been formally recorded.

Very little of the area within the Traver Planning rea has been surveyed, and documented resources likely exist. Utilization of the available data is integral to planning for future uses and activities and to determine the best management strategy for such resources at this phase of the planning process. All actions taken pursuant to the Traver Community Plan shall be planned and implemented in coordination with provisions and implementing guidelines of the California Environmental Quality Act (CEQA), as amended March 18, 2010, which states that identification and evaluation of historical resources is required for any action that may result in a potential adverse effect on the significance of such resources, which includes archaeological resources.

Figure 2a. Historic Structure, 36617 Burke

Figure 2b. Historic Structure, 36661 Baker

Figure 2c. Historic Barn, Bullard west of Zante

Once specific projects are planned, targeted studies can be conducted to avoid or minimize impacts to significant cultural resources.

Recommendations

The following recommendations are offered to ensure that cultural resources are afforded an appropriate level of protection and preservation, while also allowing for future planning and development:

- Incorporate within the Traver Community Plan the identification and management of potentially sensitive prehistoric and historic-period resources;
- Ensure that the local Native American communities are included in all planning and development activities;
- Conduct intensive cultural resources field inventories prior to development of specific projects that could disturb or destroy sensitive and significant cultural resources.

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PREPARER'S QUALIFICATIONS

C. Kristina Roper conducted the historical resources inventory and background research, and assisted in the preparation of this Archaeological Survey Report. Ms. Roper has over 30 years of professional experience in the field of archaeology, historical research and architectural evaluation, specifically in the investigation and management of cultural resources within the context of local, state and federal regulatory compliance for projects in the Far West. Ms. Roper holds a Master's degree in Cultural Resources Management awarded in 1993 from Sonoma State University, and is certified as a Registered Professional Archaeologist. She has completed graduate-level coursework in historical architectural evaluation and historic research. Her experience in cultural resources management includes both government and private sector employment and contracting for archaeological field services and historic research, documentation of resource assessments for Initial Studies (IS), Environmental Assessments (EA), Environmental Impact Reports (EIR), and Environmental Impact Statements (EIS). Ms. Roper is a registered archaeologist with the California Historic Resources Information System.

Ms. Roper has participated in planning efforts with numerous governmental entities in the San Joaquin Valley. She has prepared heritage preservation ordinances for the City of Chowchilla, serves as advisory staff to the Chowchilla Heritage Preservation Commission, and has recently completed a multi-year survey and assessment of Chowchilla's built environment. Ms. Roper has prepared a cultural resources records search and sensitivity analysis to be used in the development of a revised General Plan for the City of Coalinga, Fresno County. Ms. Roper has consulted with Native American tribes in the San Joaquin Valley and Sierra foothills under Senate Bill 18 (SB 18), which applies to General Plans, Specific Plans, and amendments proposed on or after March 1, 2005. SB 18 expands CEQA for the protection of California's traditional tribal cultural places by requiring consultation with Native American Groups during these planning efforts to define resources and sacred areas and incorporate protection of these important resources into the planning process.

Ms. Roper has served as a Lecturer in Anthropology at California State University Fresno from 1995 to the present. Among her many courses taught is an upper division course in Cultural Resources Management which provides an overview of state and federal historic preservation law and the identification and evaluation of cultural resources. From 2002 through June of 2009, Ms. Roper served as Project Director for a services contract with the California Department of Transportation, District 6, Cultural Resources Branch, administered by the California State University Foundation. Ms. Roper supervised a team of cultural resources technicians who performed professional and technical services required by Caltrans for cultural resource studies. These included archaeological survey, title search for historic structures and properties, prehistoric and historic background research, excavation of archaeological sites, electronic data entry, and maintenance of confidential archaeological records and files.

TRIBAL CONSULTION RECORD

Consultation Notice – Traver Community Wastewater System Improvements																
TRIBE CONTACTED	REQUEST TYPE		DOCUMENTS SENT					MAILED				CONSULTATION PERIOD		CONSULTATION / ACTIONS		
	AB 52	SB 18	Map	Project Description	SLF Search	CHRIS	Other	Date	E-mail	FedEx	Certified US Mail	Return Receipt	Period Ends	Date	TYPE	Summary
SACRED LAND FILE (SLF) REQUEST																
Native American Heritage Commission	X		X	X				8/9/17	X					8/21/17	Letter	Response to SLF Search request
CONSULTATION REQUEST LETTERS																
Kern Valley Indian Council Julie Turner, Secretary P.O. Box 1010 Lake Isabella, CA 93240	X						NOP	8/23/17			X	8/25/17	9/24/17			
Kern Valley Indian Council Robert Robinson, Chairperson P.O. Box 401 Weldon, CA 93283	X						NOP	8/23/17			X	8/25/17	9/24/17			
Kitanemuk & Yowlumne Tejon Indians Delia Dominguez, Chairperson 115 Radio Street Bakersfield, CA, 93305	X						NOP	8/10/17			X	---	---			Letter returned unclaimed 9/12/17. Called 9/19/17 and left a voice message about updating address. Delia Dominguez called 9/21/17 at 9:45AM and said “We have no comment and we live down in Bakersfield so it doesn’t really affect us down here.”
Santa Rosa Indian Community of the Santa Rosa Rancheria Tachi Yokut Tribe Rueben Barrios Sr., Chairperson P. O. Box 8 Lemoore, CA 93245	X						NOP	8/10/17			X	8/14/17	9/13/17			
Santa Rosa Indian Community of the Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Hector Franco, Director P. O. Box 8 Lemoore, CA 93245	X						NOP	8/10/17			X	8/14/17	9/13/17			
Santa Rosa Indian Community of the Santa Rosa Rancheria Tachi Yokut Tribe Cultural Department Shana Powers, Cultural Specialist P. O. Box 8 Lemoore, CA 93245	X						NOP	8/10/17			X	8/14/17	9/13/17			

Consultation Notice – Traver Community Wastewater System Improvements																
TRIBE CONTACTED	**REQUEST TYPE**		**DOCUMENTS SENT**					**MAILED**				**CONSULTATION PERIOD**		**CONSULTATION / ACTIONS**		
	AB 52	**SB 18**	**Map**	**Project Description**	**SLF Search**	**CHRIS**	**Other**	**Date**	**E-mail**	**FedEx**	**Certified US Mail**	**Return Receipt**	**Period Ends**	**Date**	**TYPE**	**Summary**
Table Mountain Rancheria Leanne Walker-Grant, Chairperson P.O. Box 410 Friant, CA, 93626	X						NOP	8/10/17			X	8/14/17	9/13/17	8/21/17	Letter	Letter dated 8/21/17 "We appreciate receiving notice; however, this project site is beyond our area of interest."
Torres Martinez Desert Cahuilla Indians Michael Mirelez, Cultural Resource Coordinator P. O. Box 1160 Thermal, CA 92274	X						NOP	8/10/17			X	8/14/17	9/13/17			
Tubatulabals of Kern Valley Robert L. Gomez, Jr., Chairperson P. O. Box 226 Lake Isabella, CA 93240	X						NOP	8/23/17			X	9/8/17	10/8/17			
Tule River Indian Tribe Neil Peyron, Chairperson P. O. Box 589 Porterville, CA 93258	X						NOP	8/10/17			X	8/21/17	9/20/17			
Tule River Indian Tribe Joseph Garfield, Council Member P. O. Box 589 Porterville, CA 93258	X						NOP	8/10/17			X	8/21/17	9/20/17			
Tule River Indian Tribe Environmental Department Kerri Vera, Director P. O. Box 589 Porterville, CA 93258	X						NOP	8/10/17			X	8/21/17	9/20/17			
Tule River Indian Tribe Felix Christman, Tribal Archaeological Monitor P. O. Box 589 Porterville, CA 93258	X						NOP	8/10/17			X	8/21/17	9/20/17			
Wuksache Indian Tribe/Eshom Valley Band Kenneth Woodrow, Chairperson 1179 Rock Haven Ct. Salinas, CA 93906	X						NOP	8/10/17			X	8/14/17	9/13/17			

APPENDIX D

PLAN OF STUDY

County of Tulare Resource Management Agency
Traver Community Wastewater System Improvements
Attachment 1 – Plan of Study

60515943 June 09, 2017



AECOM
William C. Black, PE
Project Manager

5001 E. Commercenter Drive, Suite 100, Bakersfield CA 93309

Table of Contents

Acronyms

BOD	Biochemical Oxygen Demand
CEQA	California Environmental Quality Act
Cu ft	Cubic Feet
d	Day
D	Depth
EC	Electrical conductivity
EIR	Environmental Impact Report
ft	Feet
GPD	Gallons per day
gpdsf	Gallons per Day per Square Foot
L	length
lb.	Pound
MG	Million Gallons
mg/L	Milligrams per Liter
mgd	Million Gallons per Day
MLSS	Mixed Liquor Suspended Solids
NEPA	National Environmental Protection Act
NH_4-N	Ammonium
NO_3-N	Nitrate
O&M	Operations and Maintenance
POPCC	Preliminary Opinion of Probable Construction Cost
Q	Flow
RAS	Return Activated Sludge
RWQCB	Regional Water Quality Control Board
sf	Square Foot
SLR	Solids Loading Rate
SOR	Surface Overflow Rate
SSO's	Sanitary Sewer Overflows
TM	Technical Memorandum
TSS	Total Suspended Solids
W	Width
WDR's	Waste Discharge Requirements
WWTP	Wastewater Treatment Plant

Section 1
Introduction

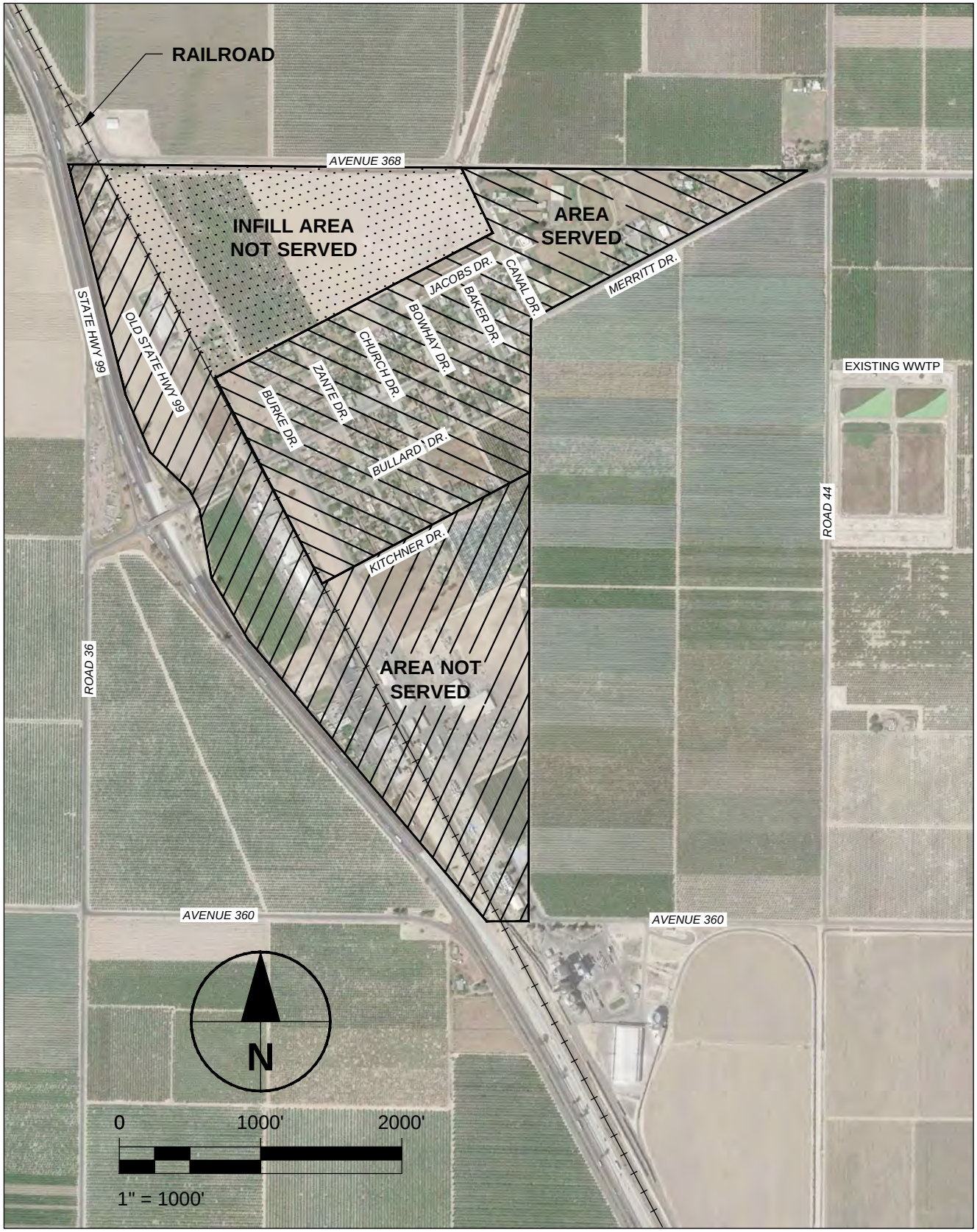
This Technical Memorandum (TM) is prepared for the County of Tulare as **ATTACHMENT 1** under SECTION VIII of the Division of Financial Assistance's Financial Assistance Application for Planning or Design. The funding is needed for the recommend wastewater collection and treatment solution for the community of Traver, an unincorporated low income community in the County of Tulare. The collection system improvements are needed to extend service to existing residences and businesses that are currently not being served, and to serve infill areas within the community that are expected to develop soon. The wastewater treatment plant improvements are needed to increase capacity and improve reliability and effectiveness so that the plant is more resilient.

Section 2
Explanation of Water Quality Problem to be Addressed

2.1 Water Quality Problem

The water quality problem in the community of Traver is the use of septic systems for certain residential, commercial and industrial properties. The existing businesses not served by the collection system are those that lie south of Kitchner Drive and those that lie west of the railroad tracks. Within the existing area being served, the existing collection system is not deep enough to reach infill areas that are expected to grow in the near future. The inability to reach these areas would result in additional onsite disposal systems. (Please refer to **Figure 1**.)

The wastewater treatment plant, which is operating under Order Number 88-098 Waste Discharge Requirements (WDR's) issued by the Regional Water Quality Control Board (RWQCB) in June 1988, is compliant with the WDR. The issue however, is the need for improvements to increase capacity and make the facility more resilient. The plant is nearly 30 years old and is rapidly reaching its design capacity. It needs to be expanded and also needs in-plant improvements to the building, the lift station, the headworks and ponds for better efficiency and better facilitate operation and maintenance. With the expansion will be the requirement of meeting the new WDR's. To meet that new requirement, a new process will be necessary. That process change will be discussed in Section 3 of this TM.



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Filename: S:\TULARE COUNTY\00000000 -TRAVER WW SRF APPLICATION\900 WORKINGDOCS-CAD\02-FIGURES\FIGURE 1.DWG

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TULARE COUNTY RESOURCE MANAGEMENT AGENCY
TRAVER COMMUNITY WASTEWATER SYSTEM IMPROVEMENTS
ATTACHMENT 1 - PLAN OF STUDY
Project No.: 00000000

AREA SERVED MAP

AECOM

Figure: 1

Section 3
Scope of Design Work

3.1 General description of work to be designed

The community of Traver will need work on the two components previously mentioned: the collection system and the treatment system. Below is a discussion of each system. Each discussion includes a description of the existing system, the need for the improvements and a design basis. Budgets for each component are covered under chapter 4 of this TM.

3.2 Collection system

3.2.1 Existing collection system

The existing sewage collection system consists of 6-inch and 8-inch sewer mains that serve single family residences, churches, one pre-school, one elementary school, a laundromat, two grocery convenience stores and a medical facility. The collection system conveys sewage by gravity to the existing wastewater treatment plant located on the east side of Road 44 approximately ¼ mile south of Merritt Drive (see **Figure 2**).

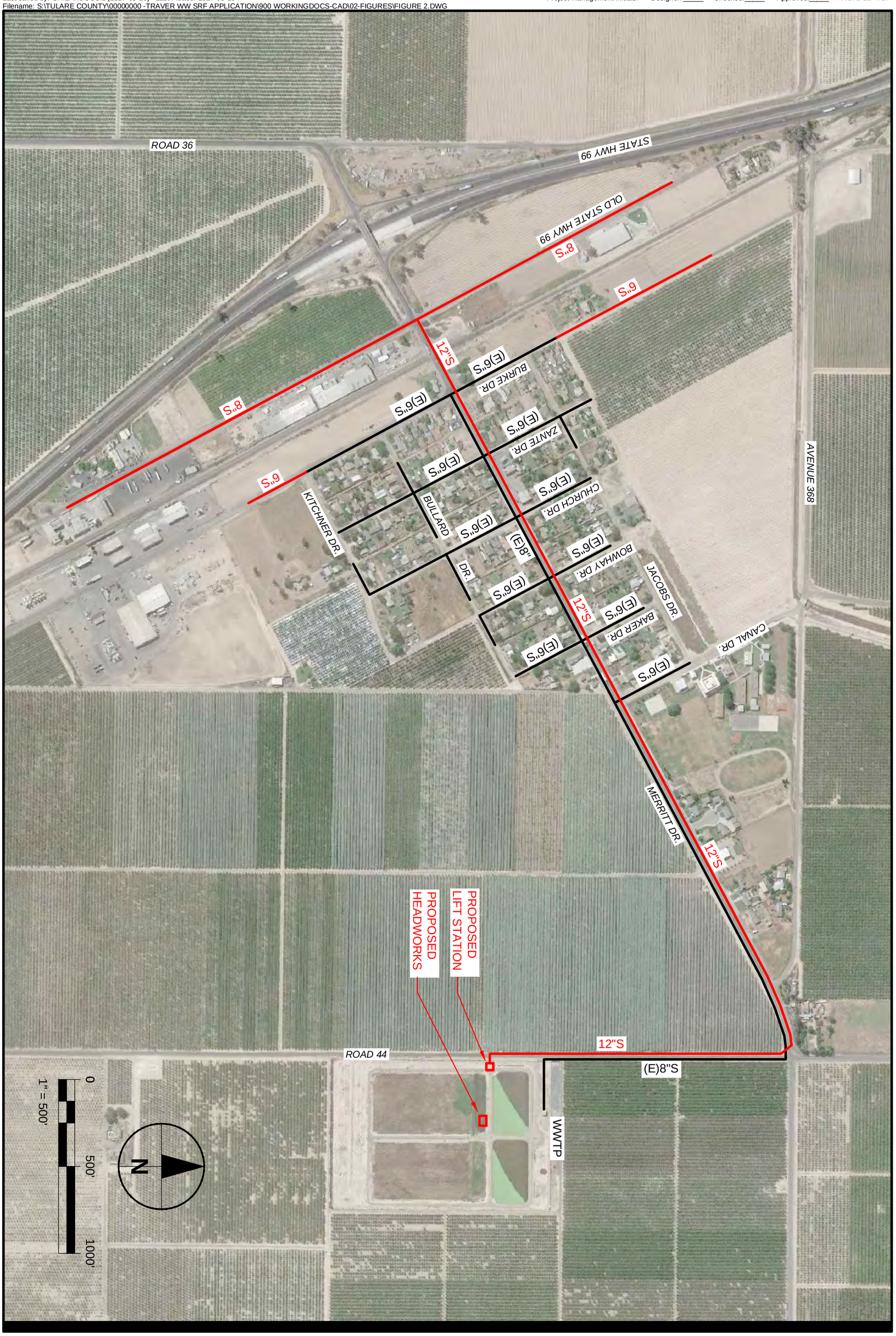
3.2.2 Needed improvements

Improvements to the existing collection system will be needed to accommodate existing and future development. Below is a list of the existing un-sewered properties and future development anticipated within the Community of Traver:

a. Truck Stop (Existing)
b. Industrial (MAF Inc. for example) (Existing)
c. 5 restaurants (Bravo Farms and others) (Existing and future)
d. 200 single family homes (Infill)(Future)
e. A 100 bedroom hotel (Infill)(Future)

3.2.3 Proposed Collection System Improvements

The proposed improvements to the collection system are shown diagrammatically on **Figure 2**. Upon completion, all of the existing and future sewage collection system will consist of gravity mains. A new lift station will be constructed at the treatment plant headworks. The work will include a 12-inch gravity main on Merritt Drive from Old State Highway 99 to Road 44 and then south along Road 44 to the wastewater treatment plant.



TULARE COUNTY RESOURCE MANAGEMENT AGENCY
TRAVER COMMUNITY WASTEWATER SYSTEM IMPROVEMENTS
ATTACHMENT 1 - PLAN OF STUDY

AECOM

Figure: 2

The balance of collection system improvements will include a crossing at the railroad and main extensions from the 12-inch trunk line.

As an alternative to the proposed all-gravity sewage collection system, a lift station and force main option was considered. For this option, the lift station would be located east of the railroad on the north side of Merritt Drive and discharge to a new gravity main on Merritt Drive. Though the lift station option would result in a lower initial capital cost, the cost of maintenance and possibility of Sanitary Sewer Overflows would increase dramatically. Operation and maintenance costs of a lift station would include power costs, fuel costs for an emergency standby generator, replacement costs for pumps, motors and generator, and most of all - cost of labor. A gravity system is reliable, relatively low in maintenance costs and will result essentially no SSO's. Reliability and low O&M costs are key considerations when developing a project to successfully serve a disadvantaged community. For this project, we are therefore, proposing the all-gravity solution.

3.3 Treatment System

3.3.1 Existing Treatment System

The existing wastewater treatment facility for the Traver community is a pond system with a capacity of 88,000 gallons per day (GPD) as permitted under the WDRs.

The wastewater plant headworks consist of a lift station only. The plant does not have a screen for removal of large debris and rags. Treatment is accomplished through stabilization ponds. The effluent is discharged for disposal to percolation/evaporation ponds.

3.3.2 Needed Improvements

Tulare County (Ross Miller) has been in contact Daniel Benas of the Central Valley RWQCB regarding potential improvements to the Wastewater Treatment Facility (WWTF). The proposed improvements to the WWTF listed in paragraph 3.3.3 below are to add reliability to the system while increasing its efficiency and effectiveness. The improvements are also needed to expand capacity. As previously stated, there are several residential, industrial and commercial establishments in the community that are not sewered and therefore use on-site disposal. There is also an imminent need to add more housing and more businesses to support the community. Without the proposed wastewater improvements, this development cannot occur. Because the wastewater treatment plant will need to expand, it is understood that the RWQCB will require modifications to the WDRs waste discharge permit with this project.

3.3.3 Proposed Plant Improvements

With the plant expansion the process will need to be changed to meet the new effluent limits:

BOD_5 30 mg/L
TSS 30 mg/L
NO_3-N 10 mg/L

Along with updated WDR's, it is anticipated that the Monitoring and Reporting Requirements that would be issued with the WDR's would include groundwater monitoring requirements. The groundwater monitoring requirements would be used by the Regional Board to verify the effluent discharges via percolation or irrigation do not degrade the underlying groundwater. The monitoring would involve sampling from monitoring wells.

This project will consider two alternative treatment solutions which have been communicated with the RWQCB: A Biolac system and a package treatment plant. The proposed improvements for each are listed below:

BIOLAC SYSTEM

1. *The system would begin with construction of a redundant aeration pond. The new pond would be designed to be compatible with future treatment options, such as Biolac, but would not use the same treatment process as the existing ponds for now. This pond will be for redundancy, and only two of the three treatment ponds at the WWTF will be in use at a time. Expansion to double plant capacity could easily follow with additional ponds and Biolac treatment.*

2. *Improvements to the lift station, including level controls, check valve replacement and conduit replacement.*

3. *Additional aerators in the existing aerated ponds.*

4. *Installation of cleanouts in the pipelines from the headworks to the aerated ponds*

5. *Construction of self-cleaning screen for the headworks, which may require a new structure and/or reliable water supply.*

6. *Electrical improvements to provide for the additional aerators and/or headworks screen."*[1]

7. In addition to the above six items, two groundwater monitoring wells and a standby generator are recommended. Those are items are not shown on the attached

[1] Resource Management Agency, Letter to Daniel Benas, Central Valley Regional Water Quality Control Board – Fresno Office, Dated August 25, 2016.

PACKAGE TREATMENT PLANT

This option for expansion of the WWTP would be accomplished using two 100,000 gpd capacity package treatment plants. Based on an assumed influent wastewater characterization, the effluent limits can be met by use of an activated sludge process with nitrification and denitrification capability. For flows in the range projected at Traver, the best way of accomplishing this is through the use of a package treatment plant. A package treatment plant will provide the process necessary to easily address this need and do so in a reliable manner.

It is recommended that the package treatment plant be constructed using two 100,000 gallon per day trains for redundancy and to address seasonal fluctuations in flow.

The system using package plant treatment would include:

1. *Improvements to the lift station, including level controls, check valve replacement and conduit replacement.*

2. *Construction of a new headworks with screen and flow meter*

3. *Two 0.1 MGD package plants*

4. *Standby Generator*

5. *Miscellaneous site work and building repairs*

6. *Groundwater monitoring wells*

Of the two processes described, the package plant option is easier to operate and maintain and more resilient in treating the wastes to the anticipated new Regional Board discharge requirements. The Biolac treatment system is effective for removal of nitrogen but is less effective in treating other constituents that may exist at Traver. It is also somewhat difficult to operate and maintain by comparison to the package plant. A recommendation for treatment is beyond the scope of this TM. With further study, and better knowledge of the constituents within the Traver waste stream, however, a treatment recommendation can be made. For the purpose of this TM, the package plant option will be embraced since it can treat a broader spectrum of constituents.

During the preliminary design phase, both options will be revisited and analyzed, but for the purpose of this TM, the estimate for the package system will be used.

Section 4
Estimated Budget

The estimated budgets for the planning (including planning, engineering, design, and administration), collection system construction and wastewater treatment plant construction are shown separately below. The total combined estimated cost including all elements is $7,475,000.

4.1 Planning

County of Tulare Resource Management Agency Traver Community Wastewater System Improvements Planning Study Budget			
		Estimated Subtask Cost	Estimated Total Task Cost
Task 1: Project Feasibility Report			$48,000
1a	Draft Feasibility Report	$29,000	
1b	Final Feasibily Report	$10,000	
1d	Right-of-Way Investigation	$5,000	
1e	Review of Service Area Boundary	$4,000	
Task 2: Sewer System Operations and Permitting Documents			$38,000
2a	Update Sewer System Management Plan	$14,000	
2b	Review Waste Discharge Requirements	$14,000	
2c	Rate Study	$10,000	
Task 3: Grant Administration and Compliance			$38,000
3a	Administration	$18,000	
3b	Labor Compliance	$5,000	
3c	Permit Assistance and Fees	$10,000	
3d	Legal & Elections	$5,000	
Task 4: Construction Documents			302,000
4a	Surveys	$28,000	
4b	Geotechnical Investigation	$24,000	
4c	Plans & Specifications	$250,000	
Task 5: Preparation of Environmental Documents (EIR)			$46,000
Includes necessary studies, drafts, noticing, and other requirements for state and federal documentation			
Task 6: Community Outreach & Income Survey			$10,000
6a	Community Outreach	$8,000	
6b	Income Survey	$10,000	
Task 7: Preparation of CWSRF Construction Application			$10,000
TOTAL:			$500,000

4.2 Collection System

The preliminary opinion of probable construction costs (POPCC) for the all-gravity collection system is shown below:

Traver Wastewater Collection System

Preliminary Opinion of Probable Construction Cost

6/9/2017

Item No.	Description	Quantity	Unit	Unit Price	Cost
1	Mobilization	1	LS	$125,000	$125,000
2	Dust Control	1	LS	$5,000	$5,000
3	Construction Staking	1	LS	$15,000	$15,000
4	Temporary Traffic Control	1	LS	$25,000	$25,000
5	Storm Water Pollution Prevention	1	LS	$5,000	$5,000
6	6-inch PVC ASTM D3034 (Gravity Sewer)	1,400	LF	$50	$70,000
8	8-inch PVC ASTM D3034 (Gravity Sewer) Average Depth 10 feet	3,930	LF	$90	$353,700
9	12-inch PVC ASTM D3034 (Gravity Sewer) Average Depth 19.5 feet	4,676	LF	$180	$841,680
10	12-inch PVC ASTM D3034 (Gravity Sewer) Average Depth 24.4 feet	1,710	LF	$220	$376,200
11	48-inch diameter Manhole (< 10' depth)	17	EA	$7,000	$119,000
12	60-inch diameter Manhole (> 10' depth)	21	EA	$16,000	$336,000
13	Jack and Bore, 24" Steel Casing	130	LF	$500	$65,000
14	Bore Pit and Receiving Pit Excavation, Fill, and Shoring	1	LS	$60,000	$60,000
15	Railroad Permits & Insurance	1	LS	$30,000	$30,000
16	Aggregate Base (Class 2)	900	CY	$40	$36,000
17	Asphalt Concrete	1,780	TONS	$90	$160,200
18	Record Drawings	1	LS	$2,000	$2,000
	Subtotal				**$2,624,780**
25%	Contingency				656,195
15%	Construction Administration				393,717
	Total				**$3,675,000**

4.3 Treatment Plant

Traver Wastewater Treatment Plant Improvement

Preliminary Opinon of Probable Construction Cost

6/8/2017

Traver Wastewater Treatment Plant Improvements
Preliminary Opinion of Probable Construction Cost

Item No.	Description	Qty.	Unit	Unit Price	Cost
1	Mobilization/Demobolization	1	LS	$101,000	$101,000
2	SWPPP	1	LS	$5,000	$5,000
3	Dust Control	1	LS	$10,000	$10,000
4	Worker Protection	1	LS	$10,000	$10,000
5	Clearing and Grubbing	1	LS	$30,000	$30,000
6	Liftstation	1	LS	$75,000	$75,000
7	Liftstation Check Valve and Conduit	1	LS	$5,000	$5,000
8	Headworks (Screen and Flow Meter)	1	LS	$250,000	$250,000
9	Emergency Generator	1	EA	$100,000	$100,000
10	Cleanouts and Site Piping Improvements	1	LS	$20,000	$20,000
11	Electrical Improvements	1	LS	$30,000	$30,000
12	Roof Replacement	1	LS	$5,000	$5,000
13	Bullet Proof Siding for Building	1	LS	$7,000	$7,000
14	Building painting and repair	1	LS	$3,000	$5,000
15	Miscellaneous Facilities and Operations	1	LS	$30,000	$30,000
16	Sludge Removal	2	EA	$110,000	$220,000
17	0.1 MG Package Plant on Concrete Slab	2	LS	$600,000	$1,200,000
18	Disposal Pond Embankment Improvements	1	LS	$150,000	$150,000
19	Groundwater Monitoring Wells	2	EA	$50,000	$100,000
20	Record Drawings	1	LS	$5,000	$3,500
	Subtotal				**$2,356,500**
25%	Contingency				$589,125
15%	Construction Administration				$353,475
	Total				**$3,300,000**

Note: Unit prices and quantities provided by client. Emergency generator, groundwater monitoring wells, and record drawings added.

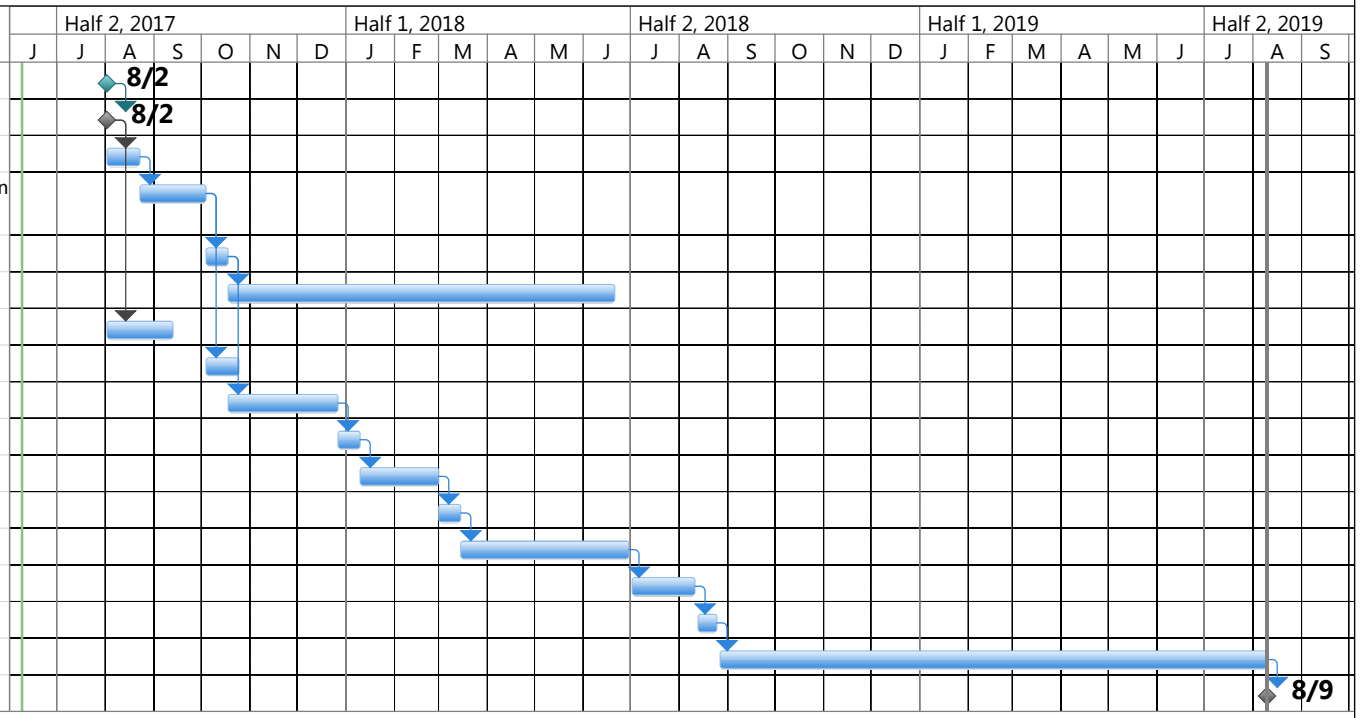
Section 5
Schedule

5.1 Treatment Plant Implementation Schedule

A Gantt chart timeline schedule for the treatment plant expansion is included on the next page.

Traver Sewer Project
Pipeline Project Schedule

ID	Task Name
1	Contract Approval
2	Kickoff Meeting
3	Research and Data Acquisition
4	Preliminary Design Report/ Basis of Design for collection and plant
5	Tulare County to Confirm Basis of Design
6	CEQA/NEPA EIR to include Notice of Determination
7	Survey
8	Geotechnical
9	50% Design and coordinate with Regional Board
10	Tulare County Review
11	100% Design
12	Tulare County Review
13	Advertise
14	Construction Contract Award
15	Construction Contract NTP
16	Construction Phase
17	Project completion



Project: Traver Sewer Project -
Date: Fri 6/9/17

Task	Inactive Summary	External Tasks	
Split	Manual Task	External Milestone	
Milestone	Duration-only	Deadline	
Summary	Manual Summary Rollup	Progress	
Project Summary	Manual Summary	Manual Progress	
Inactive Task	Start-only		
Inactive Milestone	Finish-only		

Section 6
Status of Planning Work

6.1 Status of Planning Work

There has been no design work prepared for the project so far. The following below are the planning documents that apply to the subject Traver Project:

Traver Community Sewer Collection and Wastewater Treatment Evaluation, Provost and Prichard, June 2005.

Traver Community Sewer Collection and Wastewater Treatment Evaluation (Supplement to Study Prepared in June 2005), Provost and Prichard, June 2014.

Traver Community Plan 2014 Update, Tulare County Resource Management Agency, October 2014

Traver Sewer and WWTP, Technical Memorandum, Provost and Prichard, August 8, 2016.

Traver Community Wastewater System Improvements, Technical Memorandum, AECOM, August 11, 2016.

APPENDIX E

NOTICE OF PREPARATION, SCOPING MEETING, AND AGENCY COMMENT LETTERS RECEIVED

NOTICE OF PREPARATION

NOTICE OF PREPARATION

To: State Clearinghouse
PO Box 3044/ 1400 Tenth St
Sacramento CA 95814

From: County of Tulare – RMA
5961 S Mooney Blvd
Visalia CA 93277

Date: August 8, 2017

Subject: **Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR)**

Project Title: Traver Community Wastewater System Improvements

Project Applicant: Tulare County Resource Management Agency

Project Location: Community of Traver, Tulare County, CA

Tulare County Resource Management Agency (RMA) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. The NOP and Traver Community Wastewater System Improvements Plan of Study are available on the County website at:
http://tularecounty.ca.gov//rma/index.cfm/documents-and-forms/planning-documents/environmental-planning/environmental-impact-reports/Traver Community Wastewater System Improvements/

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

A scoping meeting is scheduled for **Thursday, August 31, 2017, at 1:30 p.m.** in the Main Conference Room of the Tulare County Resource Management Agency at the address shown above.

Please direct your response to **Hector Guerra, Chief Environmental Planner** at the address shown above. Mr. Guerra may also be contacted by e-mail at hguerra@co.tulare.ca.us or by telephone at 559-624-7121.

Please provide us with the name of a contact person in your agency.

Signature _____ Date: 8/10/17
Hector Guerra,
Title: Chief Environmental Planner

Signature _____ Date: 8/10/17
Reed Schenke,
Title: Resource Management Agency Director/Environmental Assessment Officer

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375

PROJECT LOCATION AND SETTING

The unincorporated Community of Traver is located approximately ten (10) miles northwest of the City of Visalia in Tulare County in California's Central Valley. This document has been prepared using the Preferred Alternative as the proposed Project. As such, the following discussion refers to the "Preferred/Proposed Project" as "the Project". The Project site is located approximately 50 miles east of the Coastal Range and approximately 30 miles west of the foothills of the Sierra Nevada Mountain Range. The topography of Traver comprises a relatively flat, level surface with no major slopes, mountain hillsides, or bodies of water. Traver sits at an approximate elevation of 290 feet above mean sea level.

The community is generally bound to the north by Avenue 368, to the east by Road 44, to the south by Avenue 360, and to the west by State Route 99. Wastewater collection system improvements will be located within Section 16, and the existing wastewater treatment plant (WWTP) is located within Section 15, of Township 17 South, Range 23 East, Mount Diablo Base & Meridian of the Public Land Survey System. It can be found within the Traver United States Geological Survey (USGS) 7.5-minute topographic quadrangle.

Traver WWTP (Road 44, 0.25 mile south of Avenue 368):
Latitude: 36°27'17.84" N Longitude: 119°28'28.15" W

Avenue 368 and Road 44 (intersection)
Latitude: 36°27'32.22" N Longitude: 119°28'28.37" W

Merritt Drive and Old State Route 99 (intersection)
Latitude: 36°27'10.86" N Longitude: 119°29'20.31" W

PROJECT DESCRIPTION

In accordance with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), the County of Tulare Resource Management Agency (RMA) will be preparing an Draft Environmental Impact Report (EIR) to evaluate the environmental effects associated with the development of the proposed Traver Community Wastewater Systems Improvements Project as descripted in the Traver Community Wastewater Systems Improvements Plan of Study.

The proposed project will result in improvements to the existing Traver community wastewater collection system and wastewater treatment plant. Improvements to the wastewater collection system are needed to extend service to existing residences and businesses that are currently not being served, and to serve infill areas within the community that are expected to develop in the future consistent with the adopted Traver Community Plan. Improvements to the WWTP are needed to increase capacity and reliability to the system while increasing its efficiency and effectiveness so that the WWTP is better able to meet the needs of the community.

Collection System

The existing sewage collection system consists of 6-inch and 8-inch sewer mains that serve single family residences, churches, one pre-school, one elementary school, a laundromat, two grocery convenience stores and a medical facility. The collection system conveys sewage by gravity to the existing WWTP located on the east side of Road 44 approximately ¼ mile south of Merritt Drive (see Figure 2).

Improvements to the existing collection system are needed to accommodate existing and future development. The proposed improvements to the collection system are shown diagrammatically on Figure 2. Upon completion, all of the existing and future sewage collection system will consist of either gravity

mains or force mains. A new lift station will be constructed at the WWTP headworks. The work will include a 12-inch gravity main or equivalent force main on Merritt Drive from Sixth Street (Old State Highway 99) to Road 44 and then south along Road 44 to the WWTP. The balance of collection system improvements will include an underground crossing at the railroad at or near Merritt Drive and main extensions from the 12-inch trunk line.

Treatment System

The existing WWTP for the Traver community is a pond system with a capacity of 88,000 gallons per day (GPD) as permitted under the Waste Discharge Requirements (WDRs). The wastewater plant headworks consist of a lift station, a screen, and a grinder. The plant does not have a screen for removal of large debris and rags. Treatment is accomplished through facultative lagoons. The effluent is discharged for disposal to percolation/evaporation ponds.

The proposed improvements to the WWTP add reliability to the system while increasing its efficiency and effectiveness. The improvements are also needed to expand capacity to accommodate existing un-sewered and future residential, industrial and commercial developments. The Regional Water Quality Control Board (RWQCB) will likely require modifications to the WDRs if the WWTP is expanded or its processes are significantly changed.

To meet anticipated new WDRs, the treatment process will likely need to be changed or improved. Along with updated WDR's, it is anticipated that the Monitoring and Reporting Requirements that would be issued with the WDR's would include groundwater monitoring requirements. The groundwater monitoring requirements would be used by the Regional Board to verify the effluent discharges via percolation or irrigation do not degrade the underlying groundwater. The monitoring would involve sampling from monitoring wells.

This project will consider two alternative treatment solutions: A Biolac system and a package treatment plant. The proposed improvements for each are listed below.

<u>Biolac System</u>

1. The system would begin with construction of a redundant aeration pond. The new pond would be designed to be compatible with future treatment options, such as Biolac, but would not use the same treatment process as the existing ponds for now. This pond will be for redundancy, and only two of the three treatment ponds at the WWTP will be in use at a time. Expansion to double plant capacity could easily follow with additional ponds and Biolac treatment.
2. Improvements to the lift station, including level controls, check valve replacement and conduit replacement.
3. Additional aerators in the existing aerated ponds.
4. Installation of cleanouts in the pipelines from the headworks to the aerated ponds
5. Construction of self-cleaning screen for the headworks, which may require a new structure and/or reliable water supply.
6. Electrical improvements to provide for the additional aerators and/or headworks screen.
7. In addition to the above six items, two groundwater monitoring wells and a standby generator are recommended. Those are items are not shown on the attached figure.

Package Treatment Plant

This option for expansion of the WWTP would be accomplished using two 100,000 gpd capacity package treatment plants. Based on an assumed influent wastewater characterization, the effluent limits can be met by use of an activated sludge process with nitrification and denitrification capability. For flows in the range projected at Traver, the best way of accomplishing this is through the use of a package treatment plant. A package treatment plant will provide the process necessary to easily address this need and do so in a reliable manner.

It is recommended that the package treatment plant be constructed using two 100,000 gallon per day trains for redundancy and to address seasonal fluctuations in flow.

The system using package plant treatment would include:

1. Improvements to the lift station, including level controls, check valve replacement and conduit replacement;
2. Construction of a new headworks with screen and flow meter;
3. Two 0.1 MGD package plants;
4. Standby generator;
5. Miscellaneous site work and building repairs; and
6. Groundwater monitoring wells.

If you require additional information related to this notice, please contact:

Hector Guerra, Chief Environmental Planner
hguerra@co.tulare.ca.us or at (559) 624-7121

REVIEWING AGENCIES AND POTENTIAL APPROVALS REQUIRED:

The following agencies may have jurisdiction over elements of the proposed Project:

State and Federal:

- California Air Resources Board
- California Department of Conservation
- California Department of Fish and Wildlife, Region 4
- California Department of Toxic Substances Control
- California Department of Transportation, District 6
- California Department of Water Resources
- California Native American Heritage Commission
- California Office of Historic Preservation
- Regional Water Quality Control Board, Region 5
- State WRCB Clean Water Grants
- State WRCB Water Quality

Local and Regional:

- Central Valley Regional Water Quality Control Board
- San Joaquin Valley Unified Air Pollution Control District
- Southern California Edison
- Southern California Gas Company
- Tulare County Association of Governments
- Tulare County Fire Warden
- Tulare County Health and Human Services Agency (Environmental Health)
- Tulare County Local Agency Formation Commission
- Tulare County Resource Management Agency (Fire, Flood Control, Planning, Public Works)
- Union Pacific Railroad

Figure 1. Traver Community Wastewater System Project – Area Served

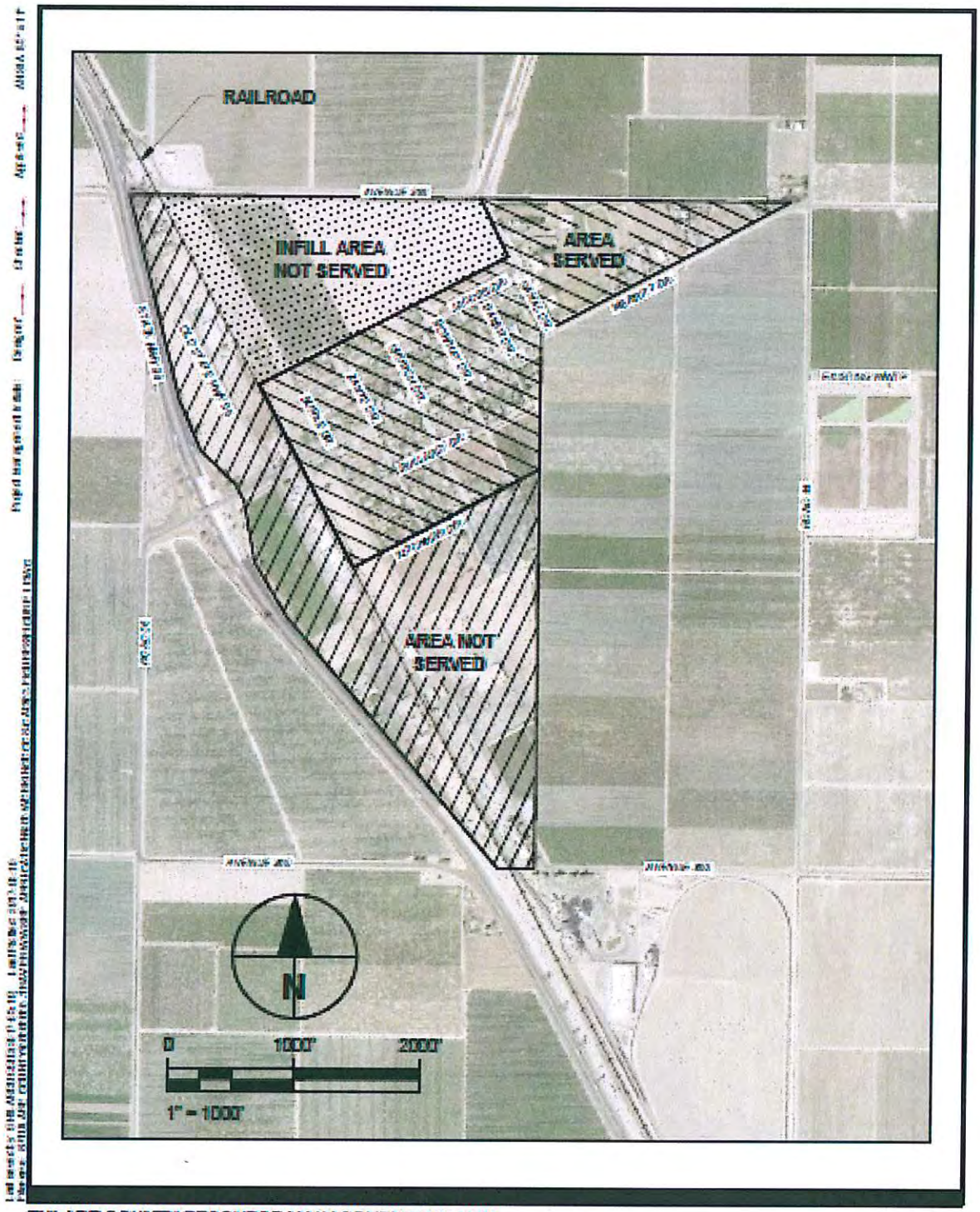
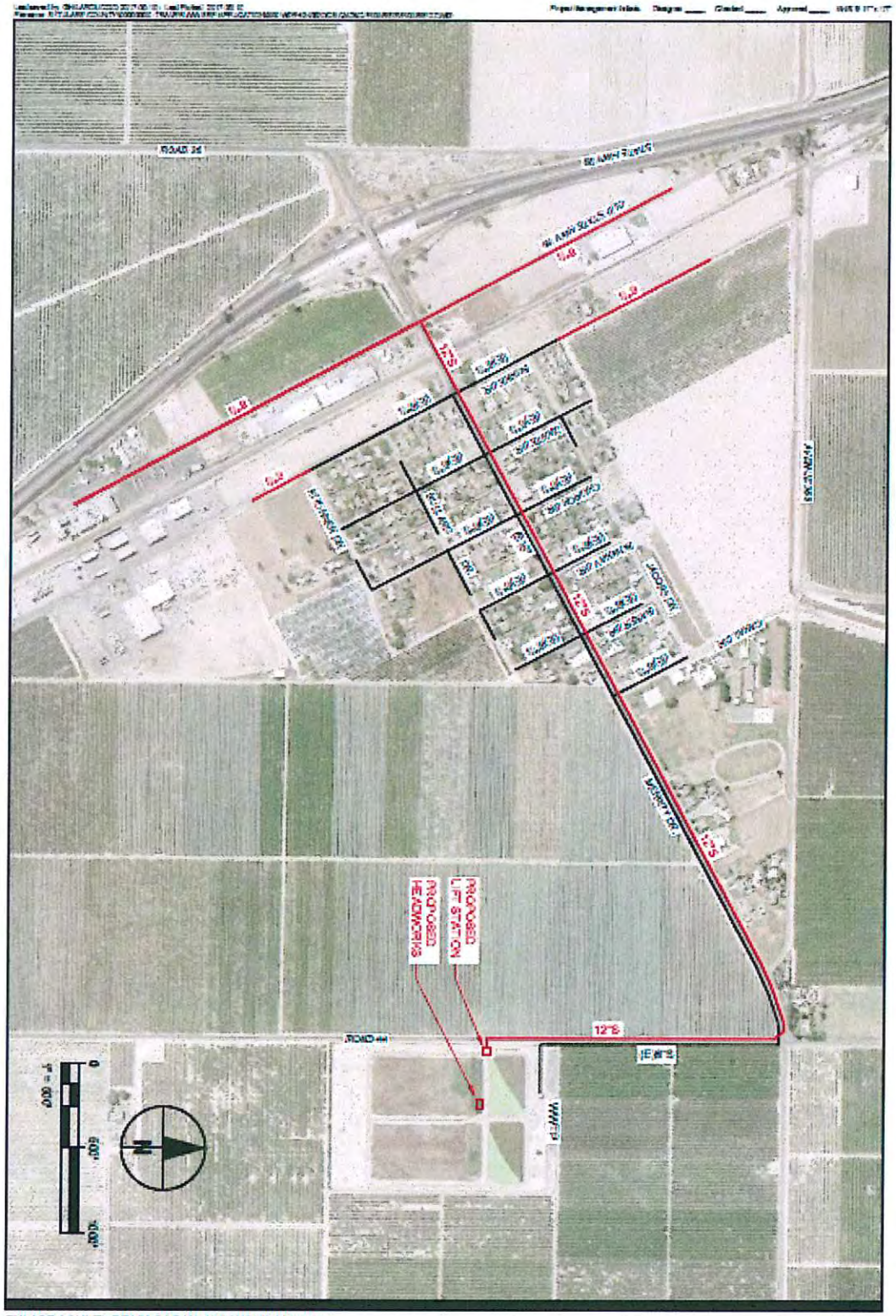


Figure 2. Traver Community Wastewater System Improvements Project
Proposed Improvements Location Map



TULARE COUNTY RESOURCE MANAGEMENT AGENCY
TRAVER COMMUNITY WASTEWATER SYSTEM IMPROVEMENTS
ATTACHMENT 1 - PLAN OF STUDY

AECOM

Figure: 2

SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

The EIR will address all checklist items contained in Appendix G of the State CEQA Guidelines. The analysis will address the probable direct, indirect, and cumulative environmental impacts associated with construction and operation of the Traver Community Wastewater System Improvements (Project). The following is a discussion of the environmental topics to be covered in the EIR:

Aesthetic/ Visual Resources

Traver is a community primarily comprised of rural residential properties and non-residential uses including churches, a pre-school, an elementary school, a Laundromat, two convenience grocery stores, and a medical facility. The area has paved roads which are owned and maintained by the County of Tulare and provide sufficient circulation throughout the community. The County of Tulare is the agency that determines property land use and zoning; however, the area is also considered in the City of Tulare's General Plan. The EIR will provide an evaluate impacts to aesthetic and visual resources.

Agriculture Resources

There are currently no agricultural operations occurring within the Project site. Adjacent properties in all directions of the Project site are productive farmland such as row crops, fruit, and nut trees. The Project will not encroach into adjacent agricultural uses and will not require adjacent properties to discontinue any agriculture related operations. The EIR will provide an assessment of potential Project related impacts to agricultural resources.

Air Quality / Greenhouse Gas Emissions

The EIR will describe regional and local air quality in the vicinity of the proposed Project site and evaluate impacts to air quality associated with Project construction and operation. An air quality analysis will be prepared to establish baseline, project, and cumulative impacts. The Project-related estimated air emissions will be compared to emissions thresholds of the San Joaquin Valley Air Pollution Control District (Air District or SJVAPCD). The EIR will describe existing air quality conditions within the San Joaquin Valley Air Basin and will evaluate the proposed Project's potential air quality impacts. Potential air quality emissions impacts include odor, dust, and construction- and operations-related activities. The EIR will also include a discussion of greenhouse gas emissions and the proposed Project's contribution to potential cumulative impacts on global climate.

Biological Resources

The proposed Project sites have been previously disturbed. Potential foraging areas within the Project site include adjacent agricultural lands north, west, east, and south of the Project sites. The Traver Canal borders the community to the north; however the Project site do not include any hydrological features. As no development or other land use changes have occurred since completion of the June 2014 biological evaluation for the Traver Community Plan Update, an updated CNDDB search of the proposed Project site will be conducted and the proposed Project's potential to affect biological resources will be analyzed in the EIR.

Cultural Resources / Tribal Cultural Resources

Although the proposed Project will be constructed on previously disturbed land, it cannot be definitively concluded that subsurface cultural resources are absent. As no development or other land use changes

have occurred since completion of the June 2014 cultural assessment for the Traver Community Plan Update, an updated search of the Southern San Joaquin Valley Information Center California Historical Resources Information System (CHRIS) will be conducted. A Sacred Land File (SLF) Search will be submitted to the Native American Heritage Commission (NAHC) and any tribes listed by the NAHC will receive consultation notices pursuant to the requirements of AB 52. Depending upon responses from tribal consultation, a cultural resources evaluation may be prepared for this Project. The EIR will examine the proposed Project's potential to affect cultural resources and Tribal cultural resources.

Geology, Soils, and Mineral Resources,

According to the USDA Natural Resources Conservation Service Web Soil Survey, the majority of the Project site consists of soil classified as Calgro-Calgro, saline-Sodic complex, 0 to 2 percent slopes, with a small area consisting of Youd Loam, 0 to 1 percent slopes. Both soils were formed in alluvium derived mainly from granitic rocks; however, the Calgro soil is considered moderately-well-drained soil while Youd Loam is considered somewhat poorly drained. According to the Tulare County General Plan 2030 Update EIR, there are no known potential mineral resources on or in the vicinity of the Project site. It is currently unknown whether the proposed Project site soils have the potential to contain paleontological resources. If such resources exist on the site, construction, expansion, and continued operational activities could result in potentially significant impacts. A geological evaluation of the proposed Project site will be conducted to establish baseline, project, and cumulative impacts related to geology, soils, mineral resources, and paleontological resources.

Hazards and Hazardous Materials

There are no known hazards or hazardous materials located within the proposed Project site, nor is the proposed Project site located on a Cortese List site. The EIR will evaluate the potential for the proposed Project to result in, or be affected by, impacts associated with hazards and hazardous materials.

Hydrology, Water Quality, and Water Supply

Traver is located within Alta Irrigation District and has numerous ditches and canals within two miles of its boundaries. These waterways include: Traver Canal, McClanahan Ditch, Clough Ditch, Banks Ditch, King Ditch, Cross Creek Wasteway. The WWTP lies within flood Zone X, which is a minimal flood hazard area according to the Federal Emergency Management Agency (FEMA) flood zone designation. The majority of the area for improvements to the collection system are located in flood Zone A, with a smaller area located in flood Zone X. Flood Zone A is a flood hazard area with a 1% annual chance or a 100 year flood, but no base flood elevations have been determined. Construction of buildings within this flood zone require no specific flood mitigation measures; however, it is recommended that all finished floor levels be elevated one (1) foot above adjacent natural ground. The proposed Project is within the Kings River Watershed and over the San Joaquin Valley Groundwater Basin and the Kings Groundwater Sub-Basin. The Project will receive water from the already in place water system provided (Traver Water, LLC). The EIR will describe the proposed Project's effect, both directly and cumulatively on the hydrology, water quality, and water supply resources.

Land Use and Planning

The EIR will describe the proposed Project's potential effects on existing and planned land uses. Traver is located entirely within the County of Tulare, and also entirely within the Alta Irrigation District and Kings River Conservation District boundaries. As such, the EIR will provide a discussion of relevant local plans and policies to address potential conflicts which could potentially result in environmental impacts.

Noise

As no development or other land use changes have occurred since completion of the noise impact assessment prepared for the Traver Community Plan Update, it is likely that the Project will be consistent with short-term, temporary, and intermittent noise levels that will comply with Tulare County General Plan policies. The EIR will describe the noise levels associated with proposed Project construction- and operation-related activities and will compare these levels to applicable noise thresholds to determine whether the proposed Project would result in a significant noise impact.

Population and Housing

The EIR will evaluate the Project's effect on population and housing in the local area based on estimations of Project employment and distribution of the employees by place of residence.

Public Services and Recreation

The EIR will evaluate the proposed Project's potential to create an adverse impact to schools, and will also evaluate effects on local police and fire services along with parks and regional recreational facilities.

Transportation/Traffic

The EIR will evaluate the proposed Project's impact on regional and local transportation facilities based on a transportation analysis that will assess construction-related impacts (heavy truck trips and construction worker trips), as well as operational impacts (employee and visitor trips). As no development or other land use changes have occurred since completion of the traffic impact assessment prepared for the Traver Community Plan Update, and the Project in not anticipated to result in transportation or traffic impacts, the EIR will nonetheless examine these resources accordingly.

Utilities and Service Systems

The community is home to over 700 residents in nearly 200 residential units. The EIR will analyze the current capacity of the above-mentioned services, as well as the proposed Project's impact on these systems and the capacity available to support the proposed Project. The EIR will also describe the solid waste facilities that would serve the proposed site. The EIR prepared for the Project will analyze the adequacy of infrastructure services for the Project including road, water and wastewater services, and if appropriate, may require mitigation measures.

Growth Inducement

The EIR will evaluate the proposed Project's potential for growth inducement resulting from the establishment of a new source of employment, as well as new demand for housing, and goods and services. The effect of primary and secondary increases in employment and economic activity will be discussed.

Cumulative Impacts

The EIR will discuss the incremental contribution of the proposed Project to cumulative effects of other past, current, and planned and reasonably foreseeable projects in the vicinity. The summary of projects method will be used where applicable. Also, to the extent feasible, the Cumulative Impacts section will quantify the degree of severity of any cumulative impact.

ALTERNATIVES EVALUATED IN THE EIR

In accordance with the CEQA Guidelines Section 15126.6, the EIR will describe a reasonable range of alternatives to the proposed Project that are capable of meeting most of the proposed Project's objectives, but would avoid or substantially lessen any of the significant effects of the proposed Project. The EIR will also identify any alternatives that were considered but rejected by the Lead Agency as infeasible and briefly explain the reasons why. The EIR will also provide an analysis of the No Project Alternative.

OPPORTUNITY FOR PUBLIC COMMENT

Interested individuals, groups, and agencies may provide to the County of Tulare Resource Management Agency, Planning Branch, written comments on topics to be addressed in the EIR for the proposed Project. Because of time limits mandated by state law, comments should be provided no later than ***5:00 p.m. Monday, September 11, 2017***. Agencies that will need to use the EIR when considering permits or other approvals for the proposed Project should provide the name of a staff contact person. Please send all comments to:

Hector Guerra, Chief Environmental Planner
Tulare County Resource Management Agency
Economic Development and Planning Branch
5961 South Mooney Boulevard
Visalia, CA 93277-9394
or via e-mail at: HGuerra@co.tulare.ca.us
or via facsimile: 559-730-2653
or via phone: 559-624-7121

SCOPING MEETING

Traver Community Wastewater System Improvements Project
Scoping Meeting
RMA Main Conference Room
August 31, 2017, 1:30 p.m.

Name	Organization	Address (mailing)	Phone	E-Mail
8.31.17	RMA	Same	624-7050	N/A
Arron R Bock				
Tim Bailey				
J. Willis	RMA		624-7122	

COMMENTS TO NOTICE OF PREPARATION

From: Hector Guerra
To: Jessica Willis
Date: 8/15/2017 11:15 AM
Subject: Fwd: Traver Community Waster Water Project NOP - SCH # 2017081024

Please print and add to our files.

Tanks!

>>> "Deel, David@DOT" <david.deel@dot.ca.gov> 8/15/2017 10:36 AM >>>
Hector -

Caltrans has completed review of the NOP for proposed the EIR and has a "NO COMMENT" on the Traver Community Waster Water Project - SCH # 2017081024.

Per the NOP, all work for the proposed new Waste Water Treatment Plant will be conducted east of SR 99, along Merritt Drive and Road 44, and will involve or impact SR 99.

Thank you for your assistance in this matter.
If you have further questions, please contact me.

DAVID DEEL | Associate Transportation Planner
Desk: 559.488.7396
Office of Planning & Local Assistance - North Section
IGR & Transit Representative - Tulare County
Training Coordinator - Planning Unit

CALTRANS - District 6
1352 W. Olive Avenue (P.O. Box 12616)
Fresno, CA 93778-2616

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❄[cid:image009.png@01D315B2.516E6E30]☐
Caltrans Mission: Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability.
Caltrans Vision: A performance-driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation, and teamwork.

August 16, 2017

Mr. Hector Guerra
Chief Environmental Planner
State Clearinghouse
PO Box 3044
Sacramento, CA 95814

Sent via electronic mail (hguerra@co.tulare.ca.us)

Subject: **Union Pacific's Comments on Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) – Traver Community Wastewater System Improvements**

Dear Mr. Guerra:

Union Pacific Railroad Company (the "Railroad") notes that the project referenced above contemplates installation of a wastewater pipeline and reconstruction of other pipeline facilities that may parallel and/or cross the Railroad's tracks at a number of locations. Specifically, the proposed project appears to cross the Fresno Subdivision at approximately Mile Post 231.23.

By this letter, the Railroad objects to the Traver Community Wastewater System Improvements unless all Railroad engineering standards and requirements are met and a terminable license agreement is executed by the Tulare County Resource Management Agency.

Safety the primary driver for the Railroad's objection. There is an inherent possibility that a Railroad accident may result in a hazardous material release by a pipeline with adverse consequences to the safety of the public. Further, pipelines are prone to leaks, accidents, and other incidents resulting in hazardous materials releases or other property damage. Additionally, the collapse of a pipeline under the Railroad presents the imminent possibility of a train derailment. The required engineering standards and specifications of all proposed facilities are designed by the Railroad to meet or exceed regulatory requirements, to reduce the probability of an accident, and to minimize the consequences of such an accident should one occur.

Information, specifications, and application forms concerning requests for pipeline crossings across the Railroad's property may be found on the internet at: *http://www.up.com/real_estate/utilities/index.htm.* Proposals that call for placement of improvements on or under our property require greater evaluation and tend to be more difficult to approve, particularly where pipelines parallel our tracks.

Further information regarding requests for encroachments on Railroad property may be found on the internet at: *www.uprr.com/reus/encroach/procedur.shtml* and *www.uprr.com/reus/encroach/encguide.shtml*.

The Railroad reserves its rights to present comments on the proposal and to seek any legal, administrative, and other remedies that may be necessary to preserve the Railroad's franchise and property rights.

Please direct all future correspondence and notices regarding these projects to my attention. For specific questions, you may also contact Jason Murray the Manager, Contracts for this area at 402-544-2623 or *jmmurray@up.com*.

Cordially,

Renay J. Robison
Director - Real Estate
UNION PACIFIC RAILROAD
1400 Douglas Street, Stop 1690
Omaha, Nebraska 68179-1690
P: 402-544-8658 E: rjrobison@up.com

TABLE MOUNTAIN RANCHERIA
TRIBAL GOVERNMENT OFFICE

August 21, 2017

Hector Guerra, Chief Environmental Planner
County of Tulare
5961 South Mooney Blvd.
Visalia, Ca. 93277

RE: Draft Environmental Impact Report for the Traver Community Wastewater System Improvements Project

To: Hector Guerra

This is in response to your letter dated, August 10, 2017, regarding, Draft Environmental Impact Report for the Traver Community Wastewater System Improvements Project.

We appreciate receiving notice; however, this project site is beyond our area of interest.

Sincerely,

Robert Pennell
Cultural Resources Director

23736
Sky Harbour Road
Post Office
Box 410
Friant
California
93626
(559) 822-2587
Fax
(559) 822-2693

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

September 11, 2017

Hector Guerra, Senior Environmental Planner
Resource Management Agency
County of Tulare
5961 South Mooney Boulevard
Visalia, California 93277

Subject: Traver Community Wastewater System Improvements (Project); Notice of Preparation; SCH # 2017081024

Dear Mr. Guerra:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation regarding the Traver Community Wastewater System Improvements Project from Tulare County for the Project pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the state. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.). CDFW expects that it may

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

need to exercise regulatory authority as provided by the Fish and Game Code. To the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Bird Protection: CDFW has jurisdiction over actions with potential to result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful take, possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird).

Unlisted Species: Species of plants and animals need not be officially listed as Endangered, Rare, or Threatened (E, R, or T) on any State or Federal list to be considered E, R, or T under CEQA. If a species can be shown to meet the criteria for E, R, or T, as specified in the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15380), CDFW recommends it be fully considered in the environmental analysis for the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: County of Tulare

Objective: The objective of the Project is to improve the existing Traver community wastewater collection system and wastewater treatment plant. Improvements will extend service to existing residences and businesses not currently being served and to serve infill areas within the community that are expected to be developed into single family residences and a hotel in the future. The Project will also increase the system's capacity and reliability

Location: The unincorporated community of Traver, Tulare County, California (36.4541, -119.4846).

Timeframe: Construction planned to occur from August 2018 to August 2019.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Tulare County in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. As requested in the Notice of Preparation (NOP), CDFW is providing recommendations on

the scope and content of the Draft Environmental Impact Report (DEIR) for the Project. Editorial comments or other suggestions may also be included to improve the document.

Based on aerial imagery, the Project activities will occur in the vicinity of several fallowed agricultural fields or vacant lots containing annual grasses, numerous large trees, and areas of bare ground. The Project site therefore has potential to support nesting, foraging, or colonization opportunities for special-status species. Specifically, CDFW is concerned that future ground-disturbing activities associated with the Project could result in impacts to nesting birds, special-status plants, and special-status wildlife species known to occur in the Project area including, but not limited to, the State threatened Swainson's hawk (*Buteo swainsoni*), the State threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*), and the State Species of Special Concern burrowing owl (*Athene cunicularia*).

Based on the potential for the Project to have a significant impact on biological resources, CDFW recommends that the DEIR consider impacts to these biological resources. To determine if these species/resources are present and if they could be impacted by the proposed Project, CDFW recommends that qualified biologists conduct focused biological surveys, during appropriate survey period(s), well in advance of any ground disturbance and prior to Project implementation. Results of the DEIR can be used to identify any potential permitting needs for this Project. The specifics of mitigation measures may be deferred, provided the lead agency commits to mitigation and establishes performance standards for implementation, when an EIR is prepared. CDFW recommends that the DEIR provide quantifiable and enforceable mitigation measures as needed, that will reduce impacts to less than significant levels.

Nesting Birds: Within the Project area, trees, areas of bare ground, and other land cover types likely provide nesting habitat for birds. CDFW encourages Project implementation occur during the non-nesting bird season. However, if the Project must occur during the breeding season (February through mid-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above. Prior to commencing work, CDFW recommends that a qualified wildlife biologist conduct surveys for active nests no more than 10 days prior to the start of the Project. Surveys should cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. In addition to direct impacts, such as nest destruction, noise, vibration, odors, and movement of workers or equipment could affect nests. Prior to initiation of construction activities, a qualified biologist should conduct a survey to establish a behavioral baseline of all identified nests. Once construction begins, a qualified biologist is advised to continuously monitor nests to detect behavioral changes resulting

from the Project. If behavioral changes occur, the work causing that change should cease and CDFW consulted for additional avoidance and minimization measures.

If continuous monitoring of identified nests by a qualified wildlife biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 500-foot no-disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. Variance from these no disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the construction area would be concealed from a nest site by topography. CDFW recommends that a qualified wildlife biologist advise and support any variance from these buffers and notify CDFW in advance of implementing a variance.

Special-Status Plants: Twelve special-status plants meeting the definition of rare or endangered under CEQA § 15380, including, but not limited to, San Joaquin adobe sunburst (*Pseudobahia perisonii*), recurved larkspur (*Delphinium recurvatum)*, lesser saltscale (*Atriplex minuscula*), brittlescale (*Atriplex depressa*), and Earlimart orache (*Atriplex erecticaulis*), are known to occur in the vicinity of the Project area. CDFW recommends the Project site be surveyed for special-status plants by a qualified botanist following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities" (CDFG, 2009). This protocol, which is intended to maximize detectability, includes the identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. In the absence of protocol-level surveys being performed, additional surveys may be necessary. Further, CDFW recommends special-status plant species be avoided whenever possible by delineation and observing a no-disturbance buffer of at least 50 feet from the outer edge of the plant population(s) or specific habitat type(s) required by special-status plant species. If buffers cannot be maintained, then consultation with CDFW is warranted to determine appropriate minimization and mitigation measures for impacts to special-status plant species. If a State or federally listed plant species is identified during botanical surveys, it is recommended that consultation with the CDFW and/or the United States Fish and Wildlife Service (USFWS) be conducted to determine permitting needs. CDFW recommends fully addressing avoidance, minimization, and mitigation measures for special-status plant species and that these measures be included as enforceable mitigation in the DEIR prepared for this Project.

Swainson's Hawk: Large trees within and adjacent to the Project site have the potential to support nesting Swainson's hawks (SWHA). To evaluate potential Project-related impacts, CDFW recommends that a qualified wildlife biologist conduct surveys for nesting raptors following the survey methodology developed by the SWHA

Technical Advisory Committee (SWHA TAC, 2000) prior to any Project implementation. If ground-disturbing Project activities take place during the normal bird breeding season (February 1 through September 15), CDFW recommends that additional pre-construction surveys for active nests be conducted by a qualified biologist no more than 10 days prior to the start of construction. If an active SWHA nest is found, CDFW recommends implementation of a minimum ½-mile no-disturbance buffer until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. If the ½-mile no-disturbance nest buffer is not feasible, consultation with CDFW is warranted and acquisition of an Incidental Take Permit (ITP) for SWHA may be necessary prior to Project implementation to comply with CESA. CDFW recommends fully addressing avoidance, minimization, and mitigation measures for SWHA and that these measures be included as enforceable mitigation in the DEIR prepared for this Project.

San Joaquin Kit Fox: San Joaquin kit fox (SJKF) have the potential to occur on the Project site. SJKF den in right-of-ways, vacant lots, etc., and populations can fluctuate over time. Presence/absence in any one year is not necessarily a reliable indicator of SJKF potential to occur on a site. SJKF may be attracted to project areas due to the type and level of ground-disturbing activities (i.e. trenching, horizontal directional drilling, etc.) and the loose, friable soils resulting from intensive ground disturbance. CDFW advises that the US Fish and Wildlife Service's "Standardized recommendations for protection of the SJKF prior to or during ground disturbance" (2011) be followed prior to any ground-disturbing activities occurring within the Project site. SJKF detection warrants consultation with CDFW to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire an ITP prior to any ground-disturbing activities to comply with CESA. CDFW recommends fully addressing avoidance, minimization, and mitigation measures for SJKF and that these measures be included as enforceable mitigation in the DEIR prepared for this Project.

Burrowing Owl: The Project site is within the range of burrowing owl (BUOW) and vacant lots and/or fallowed agricultural fields adjacent to Project activities have the potential to provide suitable habitat for the species. CDFW recommends that the "*Staff Report on Burrowing Owl Mitigation*" (CDFG, 2012) be followed prior to and during any ground-disturbing activities associated with Project implementation. Before any ground-disturbing activities begin, surveys following the California Burrowing Owl Consortium's "*Burrowing Owl Survey Protocol and Mitigation Guidelines*" (CBOC, 1993) are recommended. In the event that BUOW are found, CDFW's Staff Report recommends that impacts to occupied burrows be avoided in accordance with the following table unless a qualified biologist approved by CDFW verifies through non-invasive methods that either: 1) the birds have not begun egg laying and incubation; or 2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Failure to implement these buffers could result in nest abandonment, direct impacts to eggs or young, and/or reproductive failure, in violation of Fish and Game Code and the Migratory Bird Treaty Act.

CDFW recommends that the DEIR describe all avoidance measures that would be employed in the event that BUOW are found on the Project site, as well as methods that would be used to evict owls from burrows (including passive relocation during the non-breeding season). CDFW also recommends that the document specify, if applicable, how the impact of evicting owls would be mitigated to a less than significant level. CDFW's Staff Report recommends that foraging habitat be acquired and permanently protected to offset the loss of foraging and burrow habitat. CDFW recommends replacement of occupied burrows with artificial burrows at a ratio of 1 burrow collapsed to 1 artificial burrow constructed (1:1) as mitigation for the potentially significant impact of evicting BUOW. CDFW recommends fully addressing avoidance, minimization, and mitigation measures for BUOW and that these measures be included as enforceable mitigation in the DEIR prepared for this Project.

Editorial Comments and/or Suggestions

Federally Listed Species: CDFW also recommends consulting with the USFWS on potential impacts to federally listed species including, but not limited to, San Joaquin kit fox. Take under the Federal Endangered Species Act (FESA) is more broadly defined than CESA; take under FESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting. Consultation with the USFWS in order to comply with FESA is advised well in advance of any ground-disturbing activities.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a data base which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity

Database (CNDDB). The CNNDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

If it is determined the Project would have an impact on fish and/or wildlife, an assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the Traver Community Wastewater System Improvement DEIR to assist Tulare County in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Renée Robison, Environmental Scientist, at the address provided on this letterhead, by telephone at (559) 243-4014 ext. 274, or by electronic mail at Renee.Robison@wildlife.ca.gov.

Sincerely,

Julie A. Vance
Regional Manager

cc: Timothy Ludwick
United States Fish and Wildlife Service
2800 Cottage Way, Suite W-2605
Sacramento, California 95825

References

CBOC, 1997. Burrowing owl survey protocol and mitigation guidelines. Pages 171-177 *in* Lincer, J. L. and K. Steenhof (editors). 1997. The burrowing owl, its biology and management. Raptor Research Report Number 9.

CDFG, 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California. California Department of Fish and Game.

CDFG, 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plan Populations and Natural Communities. California Department of Fish and Game. November 24, 2009.

CDFG, 2012. Staff Report on Burrowing Owl Mitigation. California Department of Fish and Game. March 7, 2012.

SWHA TAC, 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California Central Valley. Swainson's Hawk Technical Advisory Committee.

USFWS, 2011. Standard Recommendations for the Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance. United States Fish and Wildlife Service.