

Appendix A
CEQA Scoping Summary

Stanislaus Regional Water Authority

Surface Water Supply Project

Stanislaus County, California

State Clearinghouse Number: 2017022077

CEQA Scoping Summary

Prepared for:

Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, CA 95380

Prepared by:

Horizon Water and Environment, LLC
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May 2017

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- Attachment A. Notice of Preparation of an EIR
- Attachment B. State Clearinghouse Notice of Preparation Posting
- Attachment C. Public Comments Received

CEQA Scoping Summary

Overview of the Proposed Project

The Stanislaus Regional Water Authority (SRWA) is proposing to construct and operate the Surface Water Supply Project (proposed project) to provide a reliable, supplemental source of drinking water supply from surface water to the Cities of Ceres and Turlock. The proposed project would consist of the following elements: releasing up to 30,000 acre-feet per year of water from Don Pedro Reservoir, downstream diversion from the Tuolumne River through an existing infiltration gallery and newly constructed pump station and raw water pipelines, treatment at a newly constructed water treatment plant, conveyance of the treated water to Ceres and Turlock, and connection to the existing potable water system infrastructure of the two cities. The proposed project also includes a minimum annual transfer of 2,000 af of “offset water” from SRWA member agencies to the Turlock Irrigation District. More information about the proposed project is available in Attachment A, *Notice of Preparation of an EIR*.

Background and Purpose of the Scoping Process

Scoping refers to the process of determining the scope, focus, content, and extent of an environmental impact report (EIR). A key feature of the scoping process is engagement of the public and public agencies to obtain feedback regarding the proposed project. The scoping comment period offers an important opportunity for the public and agencies to review and comment during the early phases of the environmental compliance process. Scoping helps the lead agency to identify and select an appropriate range of alternatives to be considered in the EIR. Scoping also helps the lead agency to define analysis methods, identify at a preliminary level the potential environmental effects to be considered in detail, and consider mitigation measures to avoid or compensate for adverse effects. In some cases, the scoping process may also identify issues that the public feels do not warrant analysis in the EIR.

This report documents the scoping process undertaken by SRWA, which is the lead agency for the proposed project, in compliance with Section 15082 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). This report also summarizes comments received from agencies, organizations, and individuals consistent with Section 15082(b) of the State CEQA Guidelines.

Proposed Project Scoping Process

Scoping is initiated when the lead agency issues a Notice of Preparation (NOP) announcing the beginning of the EIR process. In accordance with Section 15082 of the State CEQA Guidelines, an NOP was developed that provided information on the background, goals, and objectives of the Proposed Project. The NOP announced SRWA’s intention to prepare an EIR and requested public

and agency comment on alternatives and issues to be addressed in the EIR. A copy of the NOP is included in **Attachment A**.

The NOP for the proposed project was received by the Governor’s Office of Planning and Research, State Clearinghouse on March 1, 2017, which initiated the public scoping period. The State Clearinghouse Number for this project is 2017022077. A copy of the State Clearinghouse posting can be found in **Attachment B**. The NOP was distributed for review and comment to numerous federal and state agencies; public service agencies and departments within Stanislaus County; and property owners within 500 feet of the project boundary.

The 30-day public scoping comment period officially ended on March 30, 2017.

Comments Received

Ten comment letters were received during the scoping period. **Table 1** identifies the author and affiliation of all comment letters received. Copies of the comment letters are included in **Attachment C** of this report and summarized below.

Table 1. Comment Letters Submitted on the Surface Water Supply Project NOP

Author	Affiliation	Date Received
Alex Barron	Turlock Irrigation District	March 13, 2017
Patricia Cole, chief, San Joaquin Valley Division	U.S. Fish and Wildlife Service	March 13, 2017
Waleed Yosif, Sr., REHS, Senior Registered Environmental Health Specialist	Stanislaus County Department of Environmental Resources	March 15, 2017
Scott McFarland, Senior, Petition & Licensing Unit	State Water Resources Control Board, Division of Water Rights	March 22, 2017
Jami Aggers, Director	Stanislaus County Parks and Recreation	March 22, 2017
Katy Sanchez, Associate Environmental Planner	Native American Heritage Commission	March 22, 2017
Erin Strange, San Joaquin River Branch Chief	National Marine Fisheries Service, Central Valley Office	March 23, 2017
Stephanie Tadlock, Environmental Scientist	Central Valley Regional Water Quality Control Board	March 28, 2017
Julie A. Vance, Regional Manager	California Department of Fish and	March 29, 2017

Author	Affiliation	Date Received
	Wildlife, Central Region	
Patrick Cavanah, Management Consultant	Stanislaus County Environmental Review Committee	March 31, 2017

Comment Summary by Topic

The comments received and concerns described during the scoping period involved CEQA and the scoping process, the project description and elements, potential environmental impacts, and project permitting. These comments are summarized below, and the commenter is identified. All substantive comments will be addressed in the EIR.

Comments on CEQA and the Scoping Process

- Clarification requested about whether scoping participation is voluntary or required (Turlock Irrigation District)

Comments on Project Description and Elements

- The infiltration gallery, by design, does not require screening to prevent fish entrainment; however, the project should include the design of a facility at the top of the raw water pipe, to filter the entire flow for fish, and to develop a fish-take evaluation process. (California Department of Fish and Wildlife [CDFW])
- Discuss any in-river work, including any work necessary for the maintenance and upkeep of the infiltration gallery. (CDFW)
- Include a discussion of all Memoranda of Understanding, formal and informal state and local agreements, federal biological opinions, FERC licensing requirements, and water rights affected by the project. (CDFW)

Comments on Potential Environmental Impacts

Biological Resources

- Perform a habitat assessment for the valley elderberry longhorn beetle (VELB); should suitable habitat be found in the project area, conduct field surveys to identify what impacts the project may have. (U.S. Fish and Wildlife Service [USFWS])
- Consider the potential impacts on the water and habitat quality (e.g., temperature, contaminants, dissolved oxygen, suitable habitat availability, etc.) for threatened California Central Valley steelhead in the Tuolumne River. (National Marine Fisheries Service [NMFS])

- NMFS is currently engaged in a lengthy relicensing process for the Federal Energy Regulatory Commission (FERC) project in the Tuolumne River. Take into account the interim FERC flow schedule when drafting the EIR. (NMFS)
- Address the impacts of the proposed water to be diverted, in all water year-types, to listed anadromous fish and their habitat. (NMFS)
- Provide an analysis of impacts, including beneficial impacts, to aquatic resources and an evaluation of how increased project-related releases and timing of these releases from upstream dams will benefit aquatic resources and critical fish spawning and rearing reaches. (California Department of Fish and Wildlife [CDFW])
- Provide a clearly defined schedule of flow alterations and an explanation of how these flows supplement minimum flows already required in FERC licenses. (CDFW)
- Provide an analysis of impacts to state and federally listed species, state fully protected species, and state species of special concern. Surveys for special-status plant and wildlife species should be conducted using appropriate survey methodologies and during the appropriate time of year to inform the analysis. (CDFW)
- Describe avoidance and minimization measures for birds of prey and other nesting birds that could be affected by vegetation removal or other project-related activities. (CDFW)

Cultural Resources

- Assembly Bill 52 (AB 52) applies to any project for which an NOP is filed on or after July 1, 2015. AB 52 created a separate category for “tribal cultural resources.” The project may also be subject to Senate Bill 18 (SB 18). Both SB 18 and AB 52 have tribal consultation requirements. (Native American Heritage Commission)

Hydrology and Water Quality

- The Lead Agency should ensure that any CEQA document prepared for the project considers all potential direct and indirect environmental impacts associated with the diversion and use of water. (State Water Resources Control Board [SWRCB], Division of Water Rights)
- Address and consider the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan), antidegradation considerations, Construction Storm Water General Permit, Phase I and II Municipal Separate Storm Sewer System (MS4) permits, Industrial Storm Water General Permit, Clean Water Act Section 404 permit, Clean Water Act Section 401 permit – water quality certification, waste discharge requirements, dewatering permit (low risk general order or low risk waiver), regulatory compliance for commercially irrigated agriculture, Low or Limited Threat General Permit under the National Pollutant Discharge Elimination System (NPDES), and NPDES permit, as appropriate. (Central Valley Regional Water Quality Control Board [RWQCB])

- Fully describe all available water supplies, water transfers, and infrastructure associated with the project, including offset water, and evaluate water quality associated with the offset water. (CDFW)
- Analyze the project-related improvement in water quality from blending higher quality treated surface water with existing groundwater that has declined in quality, and improvement in the quality of water that will be discharged from the wastewater treatment plant by reducing the concentration of total dissolved solids (i.e., salts) in the wastewater. (CDFW)

Recreation

- A Letter of Agreement would be provided from SRWA with regard to work that will be taking place in the park, including commitments regarding replacement/protection of trees, protection of existing improvements, irrigation system, scheduled closures of access, repaving of asphalt, access gate widening, road widening, secured staging and storage areas, security cameras, and biological studies to be completed prior to and during construction. (Stanislaus County Parks and Recreation)

Cumulative Impacts

- Evaluate potential cumulative impacts that the project could have on the watershed, including an analysis of the relationship of all flow prescriptions, and any surface and groundwater diversions that the project may affect, including existing water right applications. (CDFW)

Comments on Project Permitting

- If VELB or any other federally listed species are on site or in the vicinity, there is potential for take to occur, which would require prior consultation under Section 7 or Section 10 of the Endangered Species Act. (USFWS)
- The project may require a water right approval. The State Water Board may need to rely on the Lead Agency's CEQA document to support the evaluation of the requested approval. The Lead Agency should therefore ensure that any CEQA document prepared for the project considers all potential direct and indirect environmental impacts associated with the diversion and use of water. (SWRCB, Division of Water Rights)
- Based on discussions in 2008, a Letter of Agreement would be provided by SRWA for work that will be taking place in Fox Grove Regional Park. (Stanislaus County Parks and Recreation)
- A Construction Storm Water General Permit, Industrial Storm Water General Permit, Clean Water Act Section 404 permit, Clean Water Act Section 401 permit – water quality certification, waste discharge requirements, dewatering permit (low risk general order or low risk waiver), regulatory compliance for commercially irrigated agriculture, Low or

Limited Threat General Permit under the National Pollutant Discharge Elimination System (NPDES), and/or NPDES permit may be required. (Central Valley RWQCB)

- Outline the water rights associated with all project-related diversion and storage of flows, and fully describe all available water supplies that will be used for the project. (CDFW)

**Attachment A:
Notice of Preparation**

Notice of Preparation
of a
Draft Environmental Impact Report
for the
Surface Water Supply Project

Prepared for:

Stanislaus Regional Water Authority
c/o City of Turlock, Administrative Services
156 South Broadway, Suite 230
Turlock, CA 95380
Contact: Michael F. Brinton
209/538-5758

Prepared by:

Horizon Water and Environment, LLC
180 Grand Avenue, Suite 1405
Oakland, CA 94612
Contact: Debra Lilly
510/986-1850

February 2017

Horizon Water and Environment. 2017. *Notice of Preparation, Surface Water Supply Project EIR*. February. Prepared for Stanislaus Regional Water Authority, Turlock, CA.

INTRODUCTION

Purpose of the Notice of Preparation

The Stanislaus Regional Water Authority (SRWA) is the lead agency for preparation and review of an environmental impact report (EIR) for the Surface Water Supply Project (proposed project). The proposed project is to design, construct, operate, and maintain facilities to divert and treat water from the Tuolumne River and deliver it for use by the SRWA member cities of Ceres and Turlock. It would involve use of an existing infiltration gallery located within a portion of the streambed of the Tuolumne River; construction and operation of a wet well and raw water pump station at the infiltration gallery site, raw water pipelines, a water treatment plant, and treated water transmission mains; construction of terminal storage tanks, pump stations, and local pipeline improvements to connect to the existing municipal water distribution infrastructure; and delivery of offset water (as described below) from SRWA member agencies to Turlock Irrigation District (TID), including construction and operation of related infrastructure. The proposed project would also require various federal and state permits, approvals, and entitlements, including the approval of a TID water rights change petition by the State Water Resources Control Board to add the infiltration gallery as an authorized point of diversion and to change the purpose of use to include municipal and industrial supply.

This Notice of Preparation of an EIR (NOP) presents general background information on the scoping process, the environmental issues to be addressed in the EIR, and the anticipated uses of the EIR. It also describes the proposed project as currently envisioned. The project description will be refined during the process of preparing the draft EIR depending on, among other things, input received in comments responding to this NOP. SRWA has prepared this NOP in accordance with Section 15082 of the State California Environmental Quality Act (CEQA) Guidelines.

Scope of the EIR

The EIR will focus on the changes in the environment that would result from the proposed project. The EIR will examine all phases of the project, including planning, construction, and operation, and will be prepared with the intent that it may be used to evaluate later activities in the future (State CEQA Guidelines Sections 15162-15168).

The following is a preliminary list of potential environmental issues to be addressed in the EIR. The issues to be addressed will be finalized after comments on the NOP are received. The analysis in the draft EIR ultimately will determine whether these impacts actually could occur, will determine their level of significance, and will propose feasible mitigation measures to reduce significant impacts. Thresholds for determining significant impacts will

be based on applicable sections of the State CEQA Guidelines, regulatory agency standards, and the judgment of SRWA.

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Seismicity
- Global Climate Change and Energy Consumption
- Hazards and Hazardous Materials
- Hydrology, Groundwater, and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation
- Traffic and Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Cumulative Impacts
- Growth-Inducing Impacts
- Alternatives

Public Involvement

SRWA is soliciting the views of interested persons and agencies on the scope and content of the environmental information that is germane to the proposed project. Agencies may use the EIR prepared under the direction of SRWA when considering permits or other approvals for the proposed project. Because of the time limits mandated by state law, your written comments on the scope and content of the EIR must be ***received no later than 30 calendar days following the date of posting of this notice***. Please provide written comments to SRWA, to the attention of Michael F. Brinton, SRWA Interim General Manager, at the U.S. mail or email address provided on the title page of this document. Please include the name and phone number or email address of the contact person for your agency, if applicable.

SRWA will ensure that adequate public review and input will be available for the EIR. Public input will also be solicited during the review and comment period for the draft EIR. Finally, there will be a 10-day review period for agencies that commented on the draft EIR before certifying the final EIR at a public meeting, during which the public and agencies can provide additional comments.

PROJECT DESCRIPTION

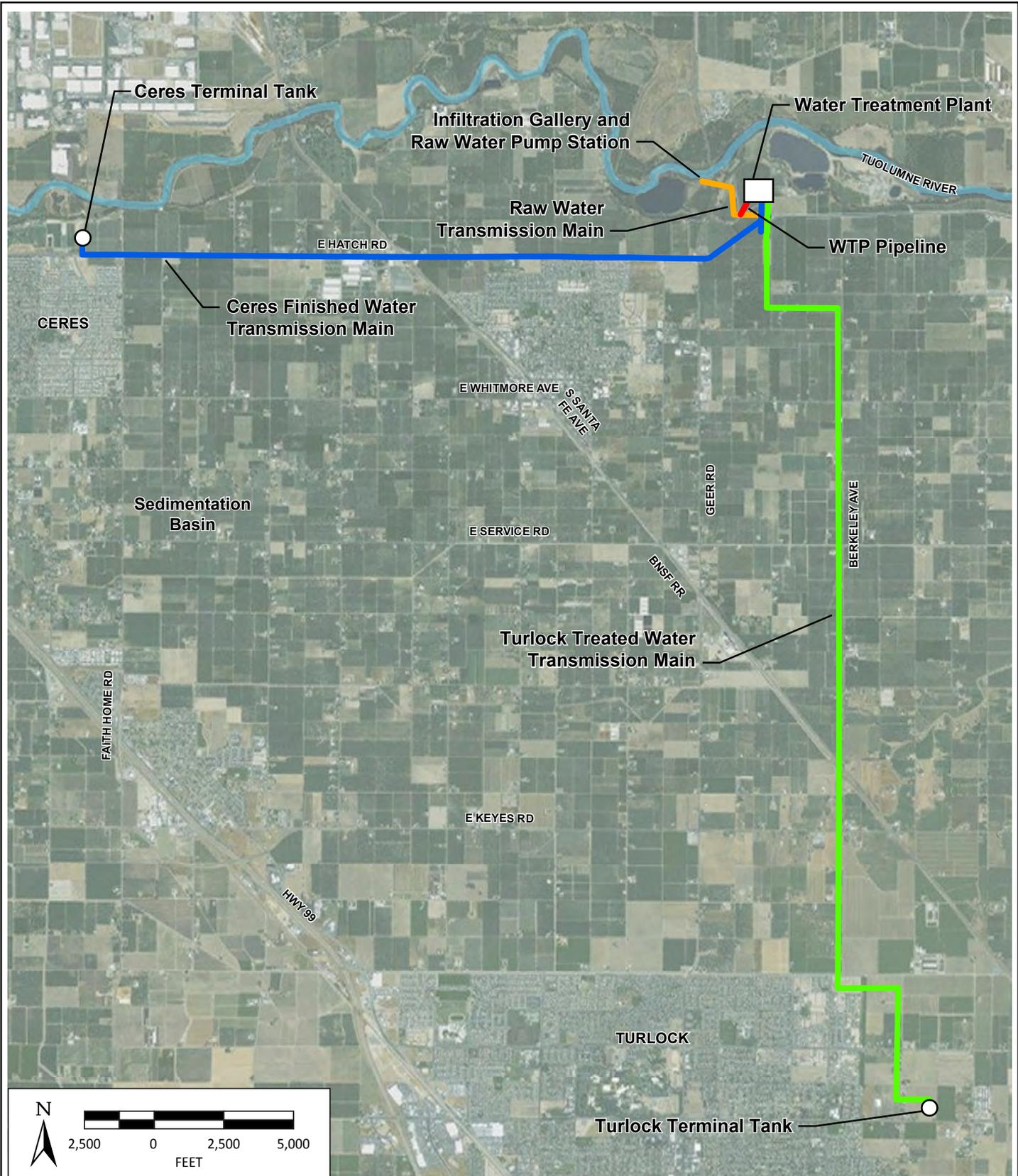
Background and Need

Ceres, Turlock, and other municipalities in Stanislaus County within the TID service area south of the Tuolumne River meet their water supply needs exclusively through use of groundwater. In recent decades, Ceres and Turlock have experienced water quality problems and water supply limitations with their groundwater systems. For more than 25 years, water supply providers in this area have been collaborating to develop a reliable, supplemental source of drinking water supply from surface water to meet existing and future community demands and to offset use of local groundwater supplies. These collaboration efforts solidified into the Surface Water Supply Project (proposed project). The Surface Water Supply Project is overseen by SRWA, formed in 2011 as a joint powers authority comprising the Cities of Ceres, Modesto, and Turlock and in partnership with TID. Modesto later withdrew from the joint powers authority. TID and SRWA approved a Water Sales Agreement (WSA) for the proposed project on July 28, 2015.

An earlier iteration of the proposed project overseen by TID, the Regional Surface Water Supply Project, was addressed in three previous CEQA compliance documents. Various elements of the project have changed since those evaluations were completed, however, and the EIR that will be prepared for the proposed project will provide a new environmental analysis for the entire project.

Project Location

The proposed project is located in Stanislaus County and would encompass activities at various locations, including a site on the Tuolumne River just west of Geer Road; a site owned by TID east of Geer Road (the water treatment plant [WTP] site); raw water pipeline routes traveling between these two sites and treated water pipeline routes from the WTP to Ceres and Turlock; terminal and local system improvements in both Ceres and Turlock (including tanks, pump stations, and local pipelines); and facilities to deliver offset water to TID. **Figure 1** shows the planned locations of the proposed project facilities; the locations of offset water facilities have not yet been determined.



Source: West Yost 2016

Legend

- Raw Water Transmission Main
- Turlock Treated Water Transmission Main
- Ceres Treated Water Transmission Main
- WTP Pipeline

**Figure 1.
Project Overview**

Prepared by:



Surface Water Supply Project

Project Objectives

SRWA proposes to construct and operate the Surface Water Supply Project to meet the following basic objectives:

- Provide the participating cities of Ceres and Turlock with a reliable base supply of treated surface water;
- Meet existing and projected base treated water demands of the participating cities while reducing reliance on a declining groundwater supply, thereby increasing overall water supply reliability;
- Improve the quality of drinking water in the participating cities by blending high-quality treated surface water with existing groundwater that has gradually declined in quality;
- Improve the quality of discharges from the participating cities' wastewater treatment plants by reducing the concentration of total dissolved solids (salts) in the wastewater, through a reduction in the concentration of total dissolved solids in the drinking water supply;
- Provide a benefit to Tuolumne River fish and other aquatic resources by increasing seasonal releases from La Grange Dam through critical fish spawning and rearing reaches of the river to accommodate proposed project diversions downstream at TID's infiltration gallery north of Hughson;
- Construct and operate the project in an efficient and cost-effective manner that minimizes impacts on the environment;
- Allow for the participating cities of Ceres and Turlock and TID to manage and use the area's surface water, groundwater, and recycled water supplies in an improved and coordinated manner; and
- Better enable the participating cities of Ceres and Turlock (and the subbasin groundwater sustainability agency) to manage the area's groundwater subbasin in a sustainable manner in accordance with the requirements of the Sustainable Groundwater Management Act.

Proposed Project Facilities

Key components of the proposed project include release of up to 30,000 acre-feet per year (af/yr) of water from Don Pedro Reservoir, downstream diversion from the Tuolumne River through an existing infiltration gallery and newly constructed pump station and raw water pipelines, treatment at a newly constructed WTP, conveyance of the treated water to Ceres and Turlock, and connection to the existing potable water system infrastructure of the two cities. The proposed project also includes a minimum annual transfer of 2,000 af of "offset water" from SRWA member agencies to TID, which would increase in dry years. While the scope of the proposed project is currently focused on Ceres and Turlock, it could be expanded to serve other retail water suppliers in other portions of TID's service area.

The infrastructure associated with the proposed project would include raw water and treated water delivery facilities, treatment facilities, terminal facilities and local treated water distribution system infrastructure, and offset water facilities.

Raw Water Delivery Facilities

The raw water delivery facilities include an existing infiltration gallery in the bed of the Tuolumne River; wet well; raw water pump station; and raw water pipelines to connect the gallery to a flow split structure, TID's Ceres Main Canal, and the WTP (see Figure 1). The infiltration gallery, raw water pump station, and raw water pipelines connecting the infiltration gallery to the Ceres Main Canal are planned to be owned by TID; a short branch of raw water pipeline connecting the flow split vault to the WTP is planned to be owned by SRWA. The infiltration gallery was constructed in 2001 but has not yet been operated. Construction of the wet well, along with development and testing of the infiltration gallery, are being proposed by SRWA as a separate, earlier project to provide information that would contribute to the design of the other proposed project facilities.

Treatment Facilities

Once constructed, the WTP and corresponding facilities would provide treated water supply to the SRWA service areas. The WTP property is currently owned by TID but is planned to be transferred to SRWA, which would construct and operate the WTP. The new WTP would be located on a 50-acre parcel west of Aldrich Road, east of Fox Grove Regional Park, and north of the Ceres Main Canal.

The WTP is planned to be constructed and operated in two phases. Phase 1 is planned to provide up to 30 million gallons per day (mgd) of capacity, with 10 mgd allocated to Ceres and 20 mgd allocated to Turlock. The Phase 2 capacity is planned to be 45 mgd (i.e., an increase of 15 mgd over the planned 30-mgd Phase 1 capacity), with 15 mgd planned to be allocated to Ceres and 30 mgd allocated to Turlock.

Treated Water Transmission Mains

The treated water transmission mains would convey treated water from the WTP to Ceres and Turlock along the planned alignments shown in Figure 1. The treated water transmission main serving Ceres is planned to be 30 inches in diameter, and the pipeline serving Turlock is planned to be 42 inches in diameter.

Terminal Storage Tanks and Local System Improvements

The terminal storage tanks and local system improvements would convey water delivered by the treated water transmission mains into each SRWA member city's distribution system. Terminal facilities would include treated water storage tanks, booster pump stations, and some new pipelines within each city's service area. Each SRWA member city would provide its own terminal facilities, with at least one new storage tank and connecting pipelines and pump stations in each city. Each set of facilities would be constructed, owned, and operated by the respective city.

Offset Water Facilities

The Surface Water Supply Project would include water transfers from SRWA back to TID (entitled “offset water”), with these transfers increasing during less-than-normal irrigation years, such as during droughts. The WSA commits TID to provide up to 30,000 af/yr to SRWA during normal years. SRWA (specifically, the City of Turlock) would return 2,000 af/yr of offset water, specifically recycled water, to TID. Pending the issuance of a waste discharge permit from the Regional Water Quality Control Board, this recycled water is planned to be provided to TID irrigation infrastructure via a direct discharge from an existing 10-inch recycled water pipeline into TID Ceres Main/Lateral #4 at Fransil Lane. During less-than-normal rainfall years, SRWA would be required to provide up to 13,000 af of offset water (i.e., recycled water, groundwater, or a combination of both) back to TID in addition to the 2,000 af of recycled water from Turlock. SRWA’s supply source and infrastructure (existing or new) for the offset water has not yet been determined. Recycled water and non-potable groundwater are planned to be conveyed into the various TID canal systems and facilities.

**Attachment B:
State Clearinghouse
Notice of Preparation Posting**

Received 7/17/11



STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

March 1, 2017

To: Reviewing Agencies
Re: Surface Water Supply Project
SCH# 2017022077

Attached for your review and comment is the Notice of Preparation (NOP) for the Surface Water Supply Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Michael Brinton
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, CA 95380

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2017022077
Project Title Surface Water Supply Project
Lead Agency Stanislaus Regional Water Authority

Type NOP Notice of Preparation

Description The proposed project is to design, construct, operate, and maintain facilities to divert and treat water from the Tuolumne River and deliver it for use by the SRWA member cities of Ceres and Turlock. It would involve use of an existing infiltration gallery located within a portion of the streambed of the Tuolumne River; construction and operation of a wet well and raw water pump station at the infiltration gallery site, raw water pipelines, a water treatment plant, and treated water transmission mains; construction of terminal storage tanks, pump stations, and local pipeline improvements to connect to the existing municipal water distribution infrastructure; and delivery of offset water (as described below) from SRWA member agencies to Turlock Irrigation District (TID), including construction and operation of related infrastructure.

Lead Agency Contact

Name Michael Brinton
Agency Stanislaus Regional Water Authority
Phone 209-538-5758 **Fax**
email
Address 156 South Broadway, Suite 270
City Turlock **State** CA **Zip** 95380

Project Location

County Stanislaus
City Ceres, Hughson, Turlock
Region
Cross Streets E. Hatch Road and Geer Road, John Fox Road and Berkeley Ave.
Lat / Long 37° 37' 0.90" N / 120° 50' 25.92" W
Parcel No. 018-003-006, 016-006-013, multiple
Township 4S **Range** 10E **Section** 2 **Base** MD

Proximity to:

Highways
Airports
Railways BNSF
Waterways Tuolumne River
Schools
Land Use Agriculture/A-2-40/Agriculture

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Flood Plain/Flooding; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Landuse; Growth Inducing; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Boating and Waterways; Central Valley Flood Protection Board; Department of Water Resources; Department of Parks and Recreation; Department of Fish and Wildlife, Region 4; Native American Heritage Commission; Public Utilities Commission; Caltrans, District 10; State Water Resources Control Board, Division of Financial Assistance; State Water Resources Control Board, Division of Water Quality; State Water Resources Control Board, Division of Water Rights; State Water Resources Control Board, Division of Drinking Water; Regional Water Quality Control Bd., Region 5 (Sacramento)

Date Received 03/01/2017 **Start of Review** 03/01/2017 **End of Review** 03/30/2017

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 7022077

Project Title: Surface Water Supply Project

Lead Agency: Stanislaus Regional Water Authority

Contact Person: Michael Brinton

Mailing Address: 156 South Broadway, Suite 270

Phone: (209) 538-5758

City: Turlock

Zip: 95380

County: Stanislaus

Project Location: County: Stanislaus

City/Nearest Community: Ceres, Hughson, Turlock

Cross Streets: E. Hatch Road and Geer Road, John Fox Road and Berkeley Avenue

Zip Code: _____

Longitude/Latitude (degrees, minutes and seconds): 37 ° 37 ' 0.90 " N / 120 ° 50 ' 25.93 " W Total Acres: 50+

Assessor's Parcel No.: 018-003-006, 018-006-013, multiple

Section: 2

Twp.: 4 S

Range: 10E

Base: Mt Diablo

Within 2 Miles: State Hwy #: _____

Waterways: Tuolumne River

Airports: _____

Railways: BNSF

Schools: _____

Document Type:

CEQA: NOP

Draft EIR

NEPA: NOI

Other: Joint Document

Early Cons

Supplement/Subsequent EIR

EA

Final Document

Neg Dec

(Prior SCH No.) _____

Draft EIS

Other: _____

Mit Neg Dec

Other: _____

FONSI

Local Action Type:

General Plan Update

Specific Plan

Rezoning

Annexation

General Plan Amendment

Master Plan

Prezone

Redevelopment

General Plan Element

Planned Unit Development

Use Permit

Coastal Permit

Community Plan

Site Plan

Other: Approval

Governor's Office of Planning & Research
After 12 PM
FEB 28 2017
STATE CLEARINGHOUSE

Development Type:

Residential: Units _____ Acres _____

Transportation: Type _____

Office: Sq.ft. _____ Acres _____

Employees _____

Mining: Mineral _____

Commercial: Sq.ft. _____ Acres _____

Employees _____

Power: Type _____ MW _____

Industrial: Sq.ft. _____ Acres _____

Employees _____

Waste Treatment: Type _____ MGD _____

Educational: _____

Hazardous Waste: Type _____

Recreational: _____

Water Facilities: Type WTP

MGD 30-45

Other: _____

Project Issues Discussed in Document:

Aesthetic/Visual

Fiscal

Recreation/Parks

Vegetation

Agricultural Land

Flood Plain/Flooding

Schools/Universities

Water Quality

Air Quality

Forest Land/Fire Hazard

Septic Systems

Water Supply/Groundwater

Archeological/Historical

Geologic/Seismic

Sewer Capacity

Wetland/Riparian

Biological Resources

Minerals

Soil Erosion/Compaction/Grading

Growth Inducement

Coastal Zone

Noise

Solid Waste

Land Use

Drainage/Absorption

Population/Housing Balance

Toxic/Hazardous

Cumulative Effects

Economic/Jobs

Public Services/Facilities

Traffic/Circulation

Other: _____

Present Land Use/Zoning/General Plan Designation:

Agriculture/A-2-40/Agriculture

Project Description: (please use a separate page if necessary)

The proposed project is to design, construct, operate, and maintain facilities to divert and treat water from the Tuolumne River and deliver it for use by the SRWA member cities of Ceres and Turlock. It would involve use of an existing infiltration gallery located within a portion of the streambed of the Tuolumne River; construction and operation of a wet well and raw water pump station at the infiltration gallery site, raw water pipelines, a water treatment plant, and treated water transmission mains; construction of terminal storage tanks, pump stations, and local pipeline improvements to connect to the existing municipal water distribution infrastructure; and delivery of offset water (as described below) from SRWA member agencies to Turlock Irrigation District (TID), including construction and operation of related infrastructure.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Resources Agency

- Resources Agency
Nadell Gayou
- Dept. of Boating & Waterways
Denise Peterson
- California Coastal Commission
Elizabeth A. Fuchs
- Colorado River Board
Lisa Johansen
- Dept. of Conservation
Crina Chan
- California Energy Commission
Eric Knight
- Cal Fire
Dan Foster
- Central Valley Flood Protection Board
James Herola
- Office of Historic Preservation
Ron Parsons
- Dept of Parks & Recreation Environmental Stewardship Section
- California Department of Resources, Recycling & Recovery
Sue O'Leary
- S.F. Bay Conservation & Dev't Comm.
Steve Goldbeck
- Dept. of Water Resources Agency
Nadell Gayou
- Fish and Game
- Depart. of Fish & Wildlife
Scott Flint
- Environmental Services Division
- Fish & Wildlife Region 1
Curt Babcock

OES (Office of Emergency Services)

- Monique Wilber
- Native American Heritage Comm.
Debbie Treadway
- Public Utilities Commission Supervisor
- Santa Monica Bay Restoration
Guangyu Wang
- State Lands Commission
Jennifer Deleong
- Tahoe Regional Planning Agency (TRPA)
Cherry Jacques

CalEPA

- Air Resources Board
- Airport & Freight
Jack Wursten
- Transportation Projects
Nesamani Kalandyur
- Industrial/Energy Projects
Mike Tollstrup

Cal State Transportation Agency CalSTA

- Caltrans - Division of Aeronautics
Philip Crimmins
- Caltrans - Planning
HQ LD-IGR
Christian Bushong
- California Highway Patrol
Suzann Ikeuchi
Office of Special Projects

Dept. of Transportation

- Caltrans, District 1
Rex Jackman
- Caltrans, District 2
Marcelino Gonzalez
- Caltrans, District 3
Eric Federicks - South
Susan Zanchi - North
- Caltrans, District 4
Patricia Maurice
- Caltrans, District 5
Larry Newland
- Caltrans, District 6
Michael Navarro
- Caltrans, District 7
Dianna Watson

Other Departments

- Food & Agriculture
Sandra Schubert
Dept. of Food and Agriculture
- Dept. of General Services
Cathy Buck
Environmental Services Section
- Delta Stewardship Council
Kevan Samsam
- Housing & Comm. Dev.
CEQA Coordinator
Housing Policy Division

Independent Commissions/Boards

- Delta Protection Commission
Erik Vink

Regional Water Quality Control Board (RWQCCB)

- RWQCCB 1
Cathleen Hudson
North Coast Region (1)
- RWQCCB 2
Environmental Document Coordinator
San Francisco Bay Region (2)
- RWQCCB 3
Central Coast Region (3)
- RWQCCB 4
Teresa Rodgers
Los Angeles Region (4)
- RWQCCB 5S
Central Valley Region (5)
- RWQCCB 5F
Central Valley Region (5)
Fresno Branch Office
- RWQCCB 5R
Central Valley Region (5)
Redding Branch Office
- RWQCCB 6
Lahontan Region (6)
- RWQCCB 6V
Lahontan Region (6)
Victorville Branch Office
- RWQCCB 7
Colorado River Basin Region (7)
- RWQCCB 8
Santa Ana Region (8)
- RWQCCB 9
San Diego Region (9)

Other _____

Conservancy _____

**Attachment C:
Public Comments Received**

Debra Lilly

Subject: FW: Re: Notice of Preparation of a Draft EIR for the Surface Water Supply Project

>>> Alex Barron <empireplant@gmail.com> 3/13/2017 9:43 AM >>>

Dear Michael,

We received 3 of your letters on last week regarding this project. We own land to the West, North and East of the TID water treatment plant on the NE corner of Hatch and Geer Roads. As we understood, is our participation / response voluntary, as it is stated, "interested persons and agencies on the scope and content of the environmental information."

I need to clarify so that I can summarize this and advise my boss.

--

Thank You & Best Regards,

Alex Barron

P.O. Box 739

Empire, CA 95319

Telephone: (209) 526-3550 Main Office

Fax: (209) 526-8110 Main Office

Received 3/13/17



United States Department of the Interior



In Reply Refer to:
08ESMF00-
2017-TA-1355

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

MAR 09 2017

Mr. Michael Brinton
Interim General Manager
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, California 95380

Subject: Surface Water Supply Project in Ceres and Turlock, California

Dear Mr. Brinton:

This letter is in response to a February 22, 2017, request for comments submitted by the Stanislaus Regional Water Authority (SRWA) to the U.S. Fish and Wildlife Service (Service), regarding a notice of preparation of a draft environmental impact report for a surface water supply project (proposed project). Your request was received by the Service on March 3, 2017. The proposed project will include the construction, operation, and maintenance of facilities to divert, treat, and deliver water from the Tuolumne River for use by the SRWA member cities of Ceres and Turlock. Specifically, the proposed project will involve: (1) construction and operation of a wet well and raw water pump station at an existing infiltration gallery site within a portion of the Tuolumne River streambed, raw water pipelines, a water treatment plant, and treated water transmission mains; (2) construction of terminal storage tanks, pump stations, and local pipeline improvements to connect to the existing municipal water distribution infrastructure; and (3) delivery of offset water from SRWA to the Turlock Irrigation District using existing pipeline infrastructure.

A review of aerial imagery shows that the proposed project is located within the range of the federally-listed as threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (beetle). Although the Service believes the probability of encountering a beetle within the proposed project area is low, it cannot be discounted entirely. According to the California Natural Diversity Database (CNDDDB), there are four presumed extant record of beetle located within 3.5 miles of the proposed project sites.

Riparian vegetation and upland habitats, such as those found on the proposed project sites in close proximity to the Tuolumne River, may support the beetle. Specifically, the beetle is entirely dependent upon the elderberry (*Sambucus* species), which is a common component of riparian areas and adjacent upland vegetation communities in California's Central Valley. As such, there is potential for the proposed project sites to provide valuable feeding, breeding, and sheltering habitat for the beetle. Given that suitable habitat may be present, the Service recommends that a habitat assessment, outlined in *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*, be conducted in order to determine the impacts development may have on the beetle. This document can be found at https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/Documents/velb_conservation.pdf. Should suitable habitat for the beetle be found, the Service recommends field surveys, also outlined in the above mentioned guidelines, to determine if the beetle is present.

Section 9 of the Act prohibits the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harass" is defined by regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. "Harm" is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.

If the beetle or any other federally-listed species are on site or in the vicinity during construction, operations, maintenance, or decommissioning, there is potential for take to occur. Any take that would occur as a result of the proposed project would require prior consultation with the Service under Section 7 or Section 10 of the Act in order to avoid violation of the Act.

If you have questions regarding this response, please contact Holley Kline (holley_kline@fws.gov) or me (patricia_cole@fws.gov) at the letterhead address or at (916) 414-6625 or (916) 414-6544.

Sincerely,



Patricia Cole
Chief, San Joaquin Valley Division

cc:

Craig Bailey, California Department of Fish and Wildlife, Fresno, CA

**STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE
REFERRAL RESPONSE FORM**

TO: Stanislaus County Planning & Community Development

FROM: Department of Environmental Resources

SUBJECT: ENVIRONMENTAL REFERRAL- **STANISLAUS REGIONAL WATER
AUTHORITY –NOTICE OF PREPARATION OF A DRAFT
ENVIRONMENTAL IMPACT REPORT FOR THE SURFACE WATER
SUPPLY PROJECT**

Based on this agencies particular field(s) of expertise, it is our position the above-described project:

- Will not have a significant effect on the environment. Please see comment below
 May have a significant effect on the environment.
 No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) - (attach additional sheet if necessary)

- 1.
- 2.

Listed below are possible mitigation measures for the above-listed impacts: *PLEASE BE SURE TO INCLUDE WHEN THE MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

- 1.

Response prepared by:

Date: 03/14/2017



Waleed Yosif Sr. REHS
SENIOR REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
Department of Environmental Resources



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

MAR 22 2017

In Reply Refer to:
AC: 266.0

Michael Brinton
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, CA 95380
michael.brinton@ci.ceres.ca.us

Dear Mr. Brinton:

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT FOR STANISLAUS REGIONAL WATER AUTHORITY'S SURFACE WATER SUPPLY PROJECT (SCH # 2017022077), TUOLUMNE RIVER IN STANISLAUS COUNTY

State Water Resources Control Board (State Water Board), Division of Water Rights (Division) staff has reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report for the Stanislaus Regional Water Authority's (SRWA) Surface Water Supply Project. The project consists of the construction and operation of facilities to divert and treat water from the Tuolumne River to provide a supplemental source of water supply for the cities of Ceres and Turlock.

Based on the information provided in the NOP, the project may require a water right approval. The SRWA should contact the Division if a water right permit or petition approval is needed. Information on water rights and the permitting process can be found on the Division's website at:

<http://www.waterboards.ca.gov/waterrights/>

If a water right approval is needed, the State Water Board will act as a Responsible Agency for this project. Accordingly, the State Water Board may need to rely on the Lead Agency's California Environmental Quality Act (CEQA) document to support the Division's evaluation of the requested approval. The Lead Agency should therefore ensure that any CEQA document prepared for the project considers all potential direct and indirect environmental impacts associated with the diversion and use of water.

If you have any questions, please contact Arvin Chi at (916) 341-6969 or by e-mail at: arvin.chi@waterboards.ca.gov. Written correspondence or inquiries should be addressed as follows: State Water Resources Control Board, Division of Water Rights, Attn: Arvin Chi, P.O. Box 2000, Sacramento, CA 95812-2000.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott McFarland".

Scott McFarland, Senior
Petition & Licensing Unit
Division of Water Rights

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

Stanislaus Regional Water Authority
c/o Michael Brinton

- 2 -

MAR 22 2017

cc: State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044



**DEPARTMENT OF PARKS AND RECREATION
Administration**

*Jami Aggers
Director*

*Merry Mayhew
Assistant Director*

3800 Cornucopia Way, Suite C, Modesto, CA 95358-9492
Phone: 209.525.6700 Fax: 209.525.6773

March 16, 2017

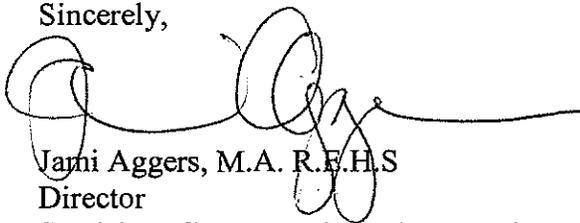
Michael F. Brinton
SRWA Interim General Manager
156 South Broadway, Suite 270
Turlock CA 95380

Dear Mr. Brinton,

We are in receipt of the Notice of Preparation of a Draft Environmental Impact Report for the Surface Water Supply Project. Attached is a copy of a letter sent by our Department in July 2008 that lists concerns, which we had discussed with Turlock Irrigation District at the time.

If you have any questions, please feel free to contact Merry Mayhew at 209-525-6760 or by email at mmayhew@envres.org.

Sincerely,



Jami Aggers, M.A. R.E.H.S.
Director
Stanislaus County Parks and Recreation

JA: ms

Enclosure



Sonya K. Harrigfeld
Director

Margarita D. Ramos
Deputy Director

3800 Cornucopia Way, Suite C, Modesto, CA 95358-9494
Phone: 209.525.6750 Fax: 209.525.6773

July 10, 2008

Wilton B. Fryer, P.E.
Civil Engineering Department Manager
Turlock Irrigation District
PO Box 949
Turlock, CA 95381-0949

SUBJECT: TID – Raw Water Pump System Project – Fox Grove Fishing Access

Mr. Fryer;

Thank you for meeting with us on June 12, 2008, to discuss the District's Raw Water Pump System Project that began in 2006. We understand this project is slated to begin in the near future.

Based on our discussions it was agreed that a Letter of Agreement would follow from the District for the work that will be taking place in the park. The agreement should include:

- Replacement/Protection of trees – Trees not indicated for removal shall be protected while trees slated for removal will be replaced and/or replanted.
- Protection of all existing improvements – Any improvements at the Access not designated for demolition will be protected.
- Irrigation system – The irrigation system in conflict with pipe trenching or construction access will be removed temporarily and repaired/replaced to working condition and locations.
- Closure of the Access – It is understood the closure of the facility during non-peak operational days will happen. Scheduled closures will be agreed upon prior to work being performed.
- Repaving of asphalt – Ensure asphalt degradation including raveling and oxidation is kept to a minimum upon repair/replacement. Repairs should include level grading, crack filling, seal coating, and if warranted, patching and overlays be provided.
- Access Gate widening – The Department understands there may be a need to widen the access gate due to concerns expressed by the Fire Department. We do hope an amicable solution can be reached, as the current gate has not been an issue since its installation.

- Road widening – It is also understood that the widening of the road may be needed should no compromise be reached with regards to the access gate.
- Secured staging and storage areas – The Department understands there will be an on-site need for staging and storage of equipment and supplies. It is also understood the District may provide for security guard personnel to remain on premises during the staging and storage phase of the construction project.
- Security Cameras - It is understood that security cameras will remain on-site during and upon completion of this project as the underground piping within our park will now be a security concern for the District. The District will post signs to ensure the general public is aware that Fox Grove Fishing Access Area is under camera surveillance 24 hours per day, seven days per week.
- Biological studies completed prior to and during construction – The Department is aware studies are being done to ensure any endangered, threatened, or special-status plant and/or wildlife species are identified and protected.

I look forward to your response. Should any questions arise, please do not hesitate to contact me or staff member Margarita D. Ramos, Deputy Director by email mramos@parksrec.org or by phone at 209.525.6771

Sincerely,



Sonya K. Harrigfeld, Director
Parks and Recreation

cc: Margarita D. Ramos, Deputy Director

Received 3/22/17

STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION

Edmund G. Brown Jr., Governor



1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710
Fax (916) 373-5471
Email: nahc@nahc.ca.gov
Website: <http://www.nahc.ca.gov>
Twitter: @CA_NAHC

March 21, 2017

Michael Brinton
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, CA 95380

Re: SCH# 2017022077 Surface Water Supply Project, Stanislaus County, California.

Dear Mr. Brinton:

The Native American Heritage Commission (NAHC) has reviewed the Notice of Preparation (NOP) prepared for the project referenced above.

The California Environmental Quality Act (CEQA)¹, specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.² If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared.³ In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended in 2014 by Assembly Bill 52. (AB 52).⁴ **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** AB 52 created a separate category for "tribal cultural resources"⁵, that now includes "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."⁶ Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.⁷ Your project may also be subject to **Senate Bill 18 (SB 18)** (Burton, Chapter 905, Statutes of 2004), Government Code 65352.3, if it also involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space. **Both SB 18 and AB 52 have tribal consultation requirements.** Additionally, if your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966⁸ may also apply.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

Agencies should be aware that AB 52 does not preclude agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52. For that reason, we urge you to continue to request Native American Tribal Consultation Lists and Sacred Lands File searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>. Additional information regarding AB 52 can be found online at http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf, entitled "Tribal Consultation Under AB 52: Requirements and Best Practices".

The NAHC recommends lead agencies consult with all California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.

A brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments is also attached.

Please contact me at Email address, katy.sanchez@nahc.ca.gov or call phone number, (916) 373-3712 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Katy Sanchez".

Katy Sanchez
Associate Environmental Planner

Attachment

¹ Pub. Resources Code § 21000 et seq.

² Pub. Resources Code § 21084.1; Cal. Code Regs., tit. 14, § 15064.5 (b); CEQA Guidelines Section 15064.5 (b)

³ Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1); CEQA Guidelines § 15064 (a)(1)

⁴ Government Code 65352.3

⁵ Pub. Resources Code § 21074

⁶ Pub. Resources Code § 21084.2

⁷ Pub. Resources Code § 21084.3 (a)

⁸ 154 U.S.C. 300101, 36 C.F.R. § 800 et seq.

Pertinent Statutory Information:

Under AB 52:

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice.

A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project,⁹ and **prior to the release of a negative declaration, mitigated negative declaration or environmental impact report.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18).¹⁰

The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- a. Alternatives to the project.
- b. Recommended mitigation measures.
- c. Significant effects.¹¹

1. The following topics are discretionary topics of consultation:

- a. Type of environmental review necessary.
- b. Significance of the tribal cultural resources.
- c. Significance of the project's impacts on tribal cultural resources.

If necessary,¹² project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency.

With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process **shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10.** Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.¹³

If a project may have a significant impact on a tribal cultural resource, **the lead agency's environmental document shall discuss** both of the following:

- a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
- b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource.¹⁴

Consultation with a tribe shall be considered concluded when either of the following occurs:

- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.¹⁵

Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 **shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program**, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable.¹⁶

If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, **the lead agency shall consider feasible mitigation** pursuant to Public Resources Code section 21084.3 (b).¹⁷

An environmental impact report **may not be certified**, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
- b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days.¹⁸

This process should be documented in the Tribal Cultural Resources section of your environmental document.

Under SB 18:

Government Code § 65352.3 (a) (1) requires consultation with Native Americans on general plan proposals for the purposes of "preserving or mitigating impacts to places, features, and objects described § 5097.9 and § 5091.993 of the Public Resources Code that are located within the city or county's jurisdiction. Government Code § 65560 (a), (b), and (c) provides for consultation with Native American tribes on the open-space element of a county or city general plan for the purposes of protecting places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code.

⁹ Pub. Resources Code § 21080.3.1, subds. (d) and (e)

¹⁰ Pub. Resources Code § 21080.3.1 (b)

¹¹ Pub. Resources Code § 21080.3.2 (a)

¹² Pub. Resources Code § 21080.3.2 (a)

¹³ Pub. Resources Code § 21082.3 (c)(1)

¹⁴ Pub. Resources Code § 21082.3 (b)

¹⁵ Pub. Resources Code § 21080.3.2 (b)

¹⁶ Pub. Resources Code § 21082.3 (a)

¹⁷ Pub. Resources Code § 21082.3 (e)

¹⁸ Pub. Resources Code § 21082.3 (d)

- SB 18 applies to **local governments** and requires them to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf
- **Tribal Consultation:** If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.**¹⁹
- **There is no Statutory Time Limit on Tribal Consultation under the law.**
- **Confidentiality:** Consistent with the guidelines developed and adopted by the Office of Planning and Research,²⁰ the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction.²¹
- **Conclusion Tribal Consultation:** Consultation should be concluded at the point in which:
 - The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation.²²

NAHC Recommendations for Cultural Resources Assessments:

- Contact the NAHC for:
 - A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - A Native American Tribal Contact List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
 - The request form can be found at <http://nahc.ca.gov/resources/forms/>.
- Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - If part or the entire APE has been previously surveyed for cultural resources.
 - If any known cultural resources have been already been recorded on or adjacent to the APE.
 - If the probability is low, moderate, or high that cultural resources are located in the APE.
 - If a survey is required to determine whether previously unrecorded cultural resources are present.
- If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. 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 public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

Examples of Mitigation Measures That May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- Avoidance and preservation of the resources in place, including, but not limited to:
 - Planning and construction to avoid the resources and protect the cultural and natural context.
 - Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource.
 - Protecting the traditional use of the resource.
 - Protecting the confidentiality of the resource.
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed.²³
- Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated.²⁴

The lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

¹⁹ (Gov. Code § 65352.3 (a)(2)).

²⁰ pursuant to Gov. Code section 65040.2,

²¹ (Gov. Code § 65352.3 (b)).

²² (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

²³ (Civ. Code § 815.3 (c)).

²⁴ (Pub. Resources Code § 5097.991).

- Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources.²⁵ In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
- Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

²⁵ per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)).

RECEIVED 3/23/17



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

MAR 22 2017

Michael F. Brinton
Interim General Manager
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, California 95380

Re: Response to the Stanislaus Regional Water Authority's Notice of Preparation of a Draft Environmental Impact Report for the Surface Water Supply Project

Dear Mr. Brinton:

This is in response to your February 22, 2017, Notice of Preparation (NOP), requesting comments from NOAA's National Marine Fisheries Service (NMFS) regarding the Draft Environmental Impact Report for the Surface Water Supply Project in Stanislaus County, California. The Stanislaus Regional Water Authority (SRWA) has requested NMFS to provide comments on the scope and content of the environmental information that is required by NMFS to complete statutory responsibilities in connection with the proposed project.

The proposed project involves the design, construction, operation, and maintenance of facilities to divert and treat water from the Tuolumne River and deliver it for use by the SRWA member cities of Ceres and Turlock, which also includes the release of up to 30,000 acre-feet per year of water from the Don Pedro Reservoir. The proposed project will provide the cities of Ceres and Turlock with a reliable supply of treated surface water while reducing reliance on declining groundwater supply, thereby increasing overall water supply reliability.

NMFS is responsible for the administration of the Endangered Species Act of 1973 (ESA), as amended [16 U.S.C. 1531 et seq.] with regards to ESA-listed anadromous fish species. Listed species and critical habitat that will be directly affected by the proposed project include federally threatened California Central Valley (CCV) steelhead (*Oncorhynchus mykiss*) and their designated critical habitat. Additionally, NMFS has the responsibility of administering the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for essential fish habitat (EFH) for Pacific Coast Salmon. The San Joaquin River Basin is designated EFH for Pacific Coast Salmon, which includes the Central Valley (CV) spring-run Chinook salmon (*O. tshawytscha*) Evolutionarily Significant Unit (ESU) and fall/late-run Chinook salmon ESU. The CV spring-run Chinook salmon were previously extirpated from the San Joaquin River Basin. However, the San Joaquin River Restoration Program (SJRRP), was established as a result of the Stipulation of Settlement in *NRDC, et al., v. Kirk Rogers, et al.*, to reintroduce CV spring-run to this historic range of the species. NMFS has designated CV spring-run Chinook salmon as a Non-essential Experimental Population in the SJRRP Area, which extends from the confluence



of the Merced River to Friant Dam. Outside of the SJRRP Area, (*i.e.* downstream of the confluence of the Merced River, including the eastside tributaries), the reintroduced fish and their progeny become part of the CV spring-run Chinook ESU.

We summarize our comments on the NOP below:

- 1) The Tuolumne River from La Grange Dam to the confluence with the San Joaquin River is designated critical habitat for CCV steelhead. CCV steelhead are present in the Tuolumne River year-round. The lack of sufficient flow in the Tuolumne River is a known stressor for the current population of *O. mykiss*, which is comprised of both the resident and anadromous life history forms. Low flows in the Tuolumne River cause water temperatures to rise to sub-lethal and even lethal temperatures for some CCV steelhead life stages, and increase the concentration of various contaminants. Exposure to temperatures or contaminants at sub-lethal levels can have effects on migratory behavior, reduce feeding and growth, stress fish, affect reproduction, and foster disease. In addition, high water temperatures in the Tuolumne River are likely to force resident and anadromous forms of *O. mykiss* to rear in a condensed section of the river below La Grange Dam, where cold water releases provide suitable water temperatures. Warmer water conditions can cause avoidance behavior in CCV steelhead, such as returning adult steelhead refusing to enter the Tuolumne River or juvenile steelhead rearing in a smaller reach of the river because the water temperature below La Grange Dam more quickly exceeds their thermal tolerance. Further reducing flows in the Tuolumne River could exacerbate these impacts to CCV steelhead. Therefore, when drafting the EIR, we encourage SRWA to consider the potential impacts of the construction, maintenance, and operation of the proposed project on the water and habitat quality (e.g. temperature, contaminants, dissolved oxygen, suitable habitat availability, etc.) for CCV steelhead in the Tuolumne River.
- 2) NMFS is currently engaged in a lengthy relicensing process for the Federal Energy Regulatory Commission (FERC) project in the Tuolumne River. We have not yet entered into ESA consultation with FERC regarding instream flow impacts for listed anadromous fish and their habitats. We encourage the SRWA to take into account the interim FERC flow schedule when drafting the EIR.
- 3) Lastly, we also recommend SRWA to address in the EIR, the impacts of the proposed water to be diverted, in all water year-types, to listed anadromous fish and their habitat.

This response is provided as technical assistance to SRWA. This response is not intended to take the place of formal comments or consultation as required under the ESA of 1973, as amended (16 U.S.C. 1531 et seq.) and does not provide incidental take authorization pursuant to section 7(b)(4) and section 7(o)(2) of the ESA. We appreciated the opportunity to provide comments to the SRWA on the NOP and look forward to working with your agency on the development of the EIR.

If you have any questions regarding this correspondence or if NMFS can provide further assistance, please contact Monica Gutierrez in our Central Valley Office at Monica.Gutierrez@noaa.gov or 916-930-3657.

Sincerely,

A handwritten signature in cursive script that reads "Erin Strange".

Erin Strange
San Joaquin River Branch Chief
Central Valley Office

Cc: California Central Valley Office
Division Chron File: 151422-WCR2017-SA00311

Central Valley Regional Water Quality Control Board

23 March 2017

Michael Brinton
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, CA 95380

CERTIFIED MAIL
91 7199 9991 7035 8422 0924

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, SURFACE WATER SUPPLY PROJECT, SCH# 2017022077, STANISLAUS COUNTY

Pursuant to the State Clearinghouse's 1 March 2017 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environment Impact Report* for the Surface Water Supply Project, located in Stanislaus County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:
http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Caltrans Phase I MS4 Permit, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.shtml.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance (i.e., discharge of dredge or fill material) of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements

Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

Land Disposal of Dredge Material

If the project will involve dredging, Water Quality Certification for the dredging activity and Waste Discharge Requirements for the land disposal may be needed.

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board’s Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low-Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering

discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.



Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, California 93710
(559) 243-4005
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



March 28, 2017

Michael Brinton
Stanislaus Regional Water Authority
156 South Broadway, Suite 270
Turlock, California 95380
E-mail: michael.brinton@ci.ceres.ca.us

**Subject: Notice of Preparation, State Clearinghouse No. 2017022077
Surface Water Supply Project
Stanislaus Regional Water Authority**

Dear Mr. Brinton:

The California Department of Fish and Wildlife (CDFW) appreciates the opportunity to review and comment on the Notice of Preparation (NOP) for the Draft Environmental Impact Report (DEIR) for the Surface Water Supply Project (Project). According to the NOP, the proposed Project would design, construct, operate, and maintain facilities to divert and treat water from the Tuolumne River and deliver it for use by the Stanislaus Regional Water Agency (SRWA) member cities of Ceres and Turlock. It would involve use of an existing infiltration gallery located within a portion of the streambed of the Tuolumne River; construction and operation of a wet well and raw water pump station at the infiltration gallery site, raw water pipelines, a water treatment plant, and treated water transmission mains; construction of terminal storage tanks, pump stations, and local pipeline improvements to connect to the existing municipal water distribution infrastructure; and delivery of offset water (as described below) from SRWA member agencies to Turlock Irrigation District (TID), including construction and operation of related infrastructure. The proposed Project would also require various federal and state permits, approvals, and entitlements, including the approval of a TID water rights change petition by the State Water Resources Control Board to add the infiltration gallery as an authorized point of diversion and to change the purpose of use to include municipal and industrial supply.

The key components of the Project include release of up to 30,000 acre-feet per year (af/yr) of water from Don Pedro Reservoir and downstream diversion from the Tuolumne River through the existing infiltration gallery and newly constructed pipelines. The proposed Project also includes a minimum annual transfer during normal rain years of 2,000 af of "offset water" from SRWA member agencies to TID, which would increase to 13,000 af/yr in dry years. According to the NOP, the scope of the Project conveyance

and infrastructure is currently focused on the cities of Ceres and Turlock, but it could be expanded to serve other retail water suppliers in other portions of TID's service area.

Project Background and Need

The Cities of Ceres and Turlock, and other municipalities in Stanislaus County within the TID service area south of the Tuolumne River, meet their water supply needs exclusively through use of groundwater. In recent decades, Ceres and Turlock have experienced water quality problems and water supply limitations with the groundwater systems. For more than 25 years, water supply providers in this area have collaborated to develop a reliable, supplemental source of drinking water supply from surface water to meet existing and future community demands and to offset use of local groundwater supplies. These efforts resulted in the Surface Water Supply Project (Project). The proposed Project is overseen by SWRA, formed in 2011 as a joint powers authority comprising the Cities of Ceres, Modesto, and Turlock and in partnership with TID. Modesto later withdrew from the joint powers authority. TID and SRWA approved a Water Sales Agreement (WSA) for the proposed Project on July 23, 2015.

Special Status Species

Project-related activities could impact the following special status plant and wildlife species:

Name	Scientific Name	Listing*		
		Federal	State	Other
California tiger salamander	<i>Ambystoma californiense</i>	T	T	---
Swainson's hawk	<i>Buteo swainsoni</i>	---	T	---
Tricolored blackbird	<i>Agelaius tricolor</i>	---	C	---
Steelhead (Central Valley DPS)	<i>Oncorhynchus mykiss irideus</i>	T	SSC	---
Chinook salmon (Central Valley spring run ESU)	<i>Oncorhynchus tshawyscha</i>	T	T	---
Chinook salmon (Central Valley fall- late fall-run ESU)	<i>O. tshawyscha</i>	C	SSC	---
Hardhead	<i>Mylopharodon conocephalus</i>	---	SSC	---
Burrowing owl	<i>Athene cunicularia</i>	---	SSC	---
White-tailed kite	<i>Elanus leucurus</i>	---	FP	---
American badger	<i>Taxidea taxus</i>	---	SSC	---
Western pond turtle	<i>Actinemys marmorata</i>	---	SSC	---
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	---	---

* Threatened (T), Candidate for Listing (C), Species of Special Concern (SSC), Fully Protected (FP)

CDFW Jurisdiction

Trustee Agency Authority: CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact plant and wildlife resources. Pursuant to Fish and Game Code Section 1802, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, CDFW is responsible for providing, as available, biological expertise to review and comment upon environmental documents and impacts arising from project activities, as those terms are used under CEQA (Division 13 [commencing with Section 21000] of the Public Resources Code).

California Endangered Species Act: CDFW is responsible for administering the California Endangered Species Act (CESA) (Fish and Game Code Section 2050, *et seq.*). "Take" of any species that is listed, or a candidate to be listed, under CESA is prohibited unless authorized by CDFW. If the Project could result in the take of any listed or candidate species, CDFW would need to issue an Incidental Take Permit for the Project to authorize that activity. The State threatened Swainson's hawk is known to occur in the Project vicinity. Suitable habitat for the State candidate tricolored blackbird may also occur in the Project vicinity.

Lake and Streambed Alteration: CDFW has regulatory authority over certain activities occurring in rivers, streams and lakes, pursuant to Fish and Game Code sections 1600 *et seq.* If the Project would substantially divert or obstruct the natural flow of any river, stream or lake; substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake; or deposit or dispose of debris, waste, sediment, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, notification to CDFW is required.

Notification to CDFW for this Project would be required for the proposed surface water diversion and rediversion, in addition to stream crossings and activities at other jurisdictional features. For projects of this nature, consultation with CDFW is recommended well in advance of Project implementation. A substantial diversion of water from a river, stream, or lake is subject to Fish and Game Code (Code) sections 1600 *et seq.*, and failure to notify is a violation of the Code. Following the submittal of a complete notification, Project activity may not commence until CDFW issues a Lake or Streambed Alteration Agreement (Agreement), determines that an Agreement is not needed, or fails to issue an Agreement according to mandated time frames. It is important to note that CDFW is required to comply with CEQA in the issuance of an Agreement.

Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians and reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515, respectively. Take of any fully protected species is prohibited and CDFW cannot authorize their incidental take. Suitable habitat for white-tailed kite occurs in the vicinity of the Project.

Bird Protection: CDFW has jurisdiction over actions that may 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 or Other Special Status 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), it should be fully considered in the environmental analysis for the Project. State species of special concern, including but not limited to those species listed above, have the potential to occur on the Project site.

Water Rights: The use of unallocated stream flows is subject to appropriation and approval by the State Water Resources Control Board (SWRCB) pursuant to Water Code Section 1225. CDFW, as Trustee Agency, is consulted by the SWRCB during the water rights process to provide terms and conditions designed to protect fish and wildlife prior to appropriation of the State's water resources. Certain fish and wildlife are reliant upon aquatic ecosystems, which in turn are reliant upon adequate flows of water. CDFW therefore has a material interest in assuring that adequate water flows within streams for the protection, maintenance and proper stewardship of those resources. CDFW provides, as available, biological expertise to review and comment on environmental documents and impacts arising from project activities.

Department Recommendations

1. The NOP states that one of the Project objectives is to provide a benefit to Tuolumne River fish and other aquatic resources by increasing seasonal releases from La Grange Dam through critical fish spawning and rearing reaches of the river, to accommodate proposed Project diversions downstream at TID's infiltration gallery north of Hughson. CDFW recommends that the DEIR provide an analysis of impacts, including beneficial impacts, to aquatic resources. CDFW also recommends an evaluation and explanation of how increased Project-related

releases and timing of these releases from upstream dams will benefit aquatic resources and critical fish spawning and rearing reaches.

2. The timing of water release and uptake at infiltration gallery is critical to benefitting the river and aquatic resources. CDFW recommends that the DEIR evaluate Project impacts, including a clearly defined schedule of flow alterations and an explanation of how these flows supplement minimum flows already required in Federal Energy Regulatory Commission (FERC) licenses.
3. The infiltration gallery, by design, does not require screening to prevent fish entrainment; however, CDFW recommends that the Project include the design of a facility, at the top of the raw water pipe, to filter the entire flow for fish, and to develop a fish-take evaluation process. This can ensure that the under-gravel infiltration facility is functioning properly and provide a safeguard against the entrainment of juvenile salmonids and other fish.
4. CDFW recommends that the DEIR discuss any in-river work including any work necessary for the maintenance and upkeep of the infiltration gallery.
5. CDFW recommends that the DEIR provide an analysis of impacts to State and federally listed species, State fully protected species, and State species of special concern, including but not limited to the species listed above. Surveys for special status plant and wildlife species should be conducted using appropriate survey methodologies and during the appropriate time of year to inform the analysis.
6. CDFW recommends that the DEIR describe avoidance and minimization measures for birds of prey and other nesting birds that could be impacted by vegetation removal or other Project-related activities.
7. CDFW recommends consultation with the United States National Marine Fisheries Service (NMFS) on potential impacts to federally listed fisheries species including but not limited to those species listed above. Early consultation with NMFS is advised in order to comply with Federal Endangered Species Act requirements.
8. CDFW recommends that the DEIR outline the water rights associated with all Project-related diversion and storage of flows, and fully describe all available water supplies that will be used for the Project. This should include information on whether any water right applications or change petitions will be filed with the State Water Resources Control Board pursuant to California Water Code.
9. CDFW recommends that the DEIR evaluate potential cumulative impacts that the Project could have on the watershed, including an analysis of the relationship of all

flow prescriptions, and any surface and ground water diversions that the project may affect, including existing water right applications.

10. As described above, the Project would include water transfers from SRWA back to TID (entitled "offset water"), with these transfers, increasing during less-than-normal irrigation years such as during droughts. SRWA's supply source and infrastructure (existing or new) for the offset water has not yet been determined. CDFW recommends that the DEIR fully describe all available water supplies, proposed transfers, and infrastructure associated with the Project including offset water. CDFW also recommends that the DEIR evaluate water quality associated with the offset water.
11. The NOP states that drinking water quality will be improved by blending higher quality treated surface water with existing groundwater that has declined in quality. The NOP also states that the Project will improve the quality of discharges from the participating cities' wastewater treatment plant by reducing the concentration of total dissolved solids (i.e., salts) in the wastewater through a reduction in the concentration of total dissolved solids in the drinking water supply. CDFW recommends that the DEIR analyze the proposed Project-related improvement in water quality, including water that will be discharged from the wastewater treatment plant.
12. CDFW recommends that the DEIR include a discussion of all Memoranda of Understanding, formal and informal State and local agreements, Federal Biological Opinions, Federal Energy Regulatory Commission licensing requirements, and water rights affected by the Project.

Depending upon the information provided in the DEIR, CDFW may have additional comments and recommendations regarding potential Project-related impacts and avoidance, minimization, and mitigation measures. If you have any questions regarding these comments, please contact Annette Tenneboe, Senior Environmental Scientist (Specialist), by telephone at (559) 243-4014, extension 231; by electronic mail at annette.tenneboe@wildlife.ca.gov; or by writing to the California Department of Fish and Wildlife at 1234 East Shaw Avenue, Fresno, California 93710.

Sincerely,



Julie A. Vance
Regional Manager

ec: See Page 7

Michael Brinton
Stanislaus Regional Water Authority
March 28, 2017
Page 7

ec: Office of Planning and Research
State Clearinghouse

Brandon Amrhein
Annette Tenneboe
California Department of Fish and Wildlife



CHIEF EXECUTIVE OFFICE

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Chief Operations Officer/
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STANISLAUS COUNTY ENVIRONMENTAL REVIEW COMMITTEE

March 27, 2017

Michael Brinton, Interim General Manager
Stanislaus Regional Water Authority (SRWA)
156 South Broadway, Suite 270
Turlock, CA 95380

**SUBJECT: ENVIRONMENTAL REFERRAL – STANISLAUS REGIONAL WATER
AUTHORITY (SRWA) – SURFACE WATER SUPPLY PROJECT – NOTICE
OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT**

Mr. Brinton:

Thank you for the opportunity to review the above-referenced project.

The Stanislaus County Environmental Review Committee (ERC) has reviewed the subject project and has no comments at this time.

The ERC appreciates the opportunity to comment on this project.

Sincerely,

Patrick Cavanah
Management Consultant
Environmental Review Committee

PC:ss

cc: ERC Members

Appendix B
Biological Resources Information

CNDDDB Species List



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Denair (3712057) OR Waterford (3712067) OR Paulsell (3712066) OR Montpelier (3712056) OR Cressey (3712046) OR Turlock (3712047) OR Hatch (3712048) OR Ceres (3712058) OR Riverbank (3712068))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Agelaius tricolor</i> tricolored blackbird	G2G3 S1S2	None Candidate Endangered	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	55 200	951 S:12	0	0	0	0	6	6	10	2	6	6	0
<i>Ambystoma californiense</i> California tiger salamander	G2G3 S2S3	Threatened Threatened	CDFW_WL-Watch List IUCN_VU-Vulnerable	185 195	1156 S:2	0	0	0	1	0	1	1	1	2	0	0
<i>Anniella pulchra</i> northern California legless lizard	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	126 126	106 S:1	0	0	0	1	0	0	0	1	1	0	0
<i>Athene cunicularia</i> burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	125 125	1941 S:1	0	0	0	1	0	0	1	0	1	0	0
<i>Atriplex cordulata var. cordulata</i> heartscale	G3T2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		66 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Atriplex subtilis</i> subtle orache	G1 S1	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive		24 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Bombus caliginosus</i> obscure bumble bee	G4? S1S2	None None	IUCN_VU-Vulnerable	70 70	181 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Bombus crotchii</i> Crotch bumble bee	G3G4 S1S2	None None		80 100	233 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	125 200	756 S:2	0	1	0	0	0	1	1	1	2	0	0
<i>Branta hutchinsii leucopareia</i> cackling (=Aleutian Canada) goose	G5T3 S3	Delisted None		70 70	19 S:1	0	0	0	0	0	1	1	0	1	0	0



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Buteo swainsoni</i> Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	55 260	2428 S:10	0	3	2	0	1	4	4	6	9	1	0
<i>Calycadenia hooveri</i> Hoover's calycadenia	G3 S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive	225 225	35 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Castilleja campestris var. succulenta</i> succulent owl's-clover	G4?T2T3 S2S3	Threatened Endangered	Rare Plant Rank - 1B.2	180 180	91 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Clarkia rostrata</i> beaked clarkia	G2G3 S2S3	None None	Rare Plant Rank - 1B.3 BLM_S-Sensitive SB_RSABG-Rancho Santa Ana Botanic Garden		74 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	G3G4 S2	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFS_S-Sensitive WBWG_H-High Priority	70 70	626 S:1	0	1	0	0	0	0	0	1	1	0	0
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	G3T2 S2	Threatened None		50 110	271 S:8	0	2	1	1	1	3	6	2	7	1	0
<i>Dipodomys heermanni dixonii</i> Merced kangaroo rat	G3G4T2T3 S2S3	None None		120 120	21 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Emys marmorata</i> western pond turtle	G3G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	60 139	1241 S:2	0	2	0	0	0	0	0	2	2	0	0
<i>Euphorbia hooveri</i> Hoover's spurge	G1 S1	Threatened None	Rare Plant Rank - 1B.2	190 190	29 S:1	0	0	0	0	1	0	1	0	0	1	0
<i>Lasiurus cinereus</i> hoary bat	G5 S4	None None	IUCN_LC-Least Concern WBWG_M-Medium Priority		235 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	G4 S3S4	Endangered None	IUCN_EN-Endangered	125 200	320 S:4	0	0	1	0	0	3	3	1	4	0	0



Summary Table Report

California Department of Fish and Wildlife

California Natural Diversity Database



Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
<i>Linderiella occidentalis</i> California linderiella	G2G3 S2S3	None None	IUCN_NT-Near Threatened	200 200	433 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Lytta moesta</i> moestan blister beetle	G2 S2	None None		100 100	12 S:1	0	0	0	0	0	1	1	0	0	1	0
<i>Monardella leucocephala</i> Merced monardella	GH SH	None None	Rare Plant Rank - 1A	115 115	3 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Mylopharodon conocephalus</i> hardhead	G3 S3	None None	CDFW_SSC-Species of Special Concern USFS_S-Sensitive	60 70	32 S:3	0	0	0	0	0	3	0	3	3	0	0
<i>Neostapfia colusana</i> Colusa grass	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	155 260	62 S:10	0	0	1	0	9	0	5	5	1	1	8
<i>Northern Hardpan Vernal Pool</i> Northern Hardpan Vernal Pool	G3 S3.1	None None		160 276	126 S:2	0	0	0	0	0	2	2	0	2	0	0
<i>Oncorhynchus mykiss irideus</i> steelhead - Central Valley DPS	G5T2Q S2	Threatened None	AFS_TH-Threatened		31 S:4	0	0	0	1	0	3	0	4	4	0	0
<i>Orcuttia inaequalis</i> San Joaquin Valley Orcutt grass	G1 S1	Threatened Endangered	Rare Plant Rank - 1B.1	155 200	45 S:7	0	0	0	0	7	0	7	0	0	0	7
<i>Orcuttia pilosa</i> hairy Orcutt grass	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1	190 200	33 S:5	0	0	1	0	4	0	4	1	1	0	4
<i>Puccinellia simplex</i> California alkali grass	G3 S2	None None	Rare Plant Rank - 1B.2	60 60	71 S:1	0	0	0	0	1	0	1	0	0	0	1
<i>Spea hammondi</i> western spadefoot	G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	195 195	454 S:1	0	0	0	0	0	1	1	0	1	0	0
<i>Tuctoria greenei</i> Greene's tuctoria	G1 S1	Endangered Rare	Rare Plant Rank - 1B.1	155 195	48 S:4	0	0	0	0	4	0	4	0	0	0	4
<i>Vireo bellii pusillus</i> least Bell's vireo	G5T2 S2	Endangered Endangered	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	120 120	479 S:1	0	0	0	0	1	0	1	0	0	1	0

IPaC Resource List

IPaC resource list

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

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

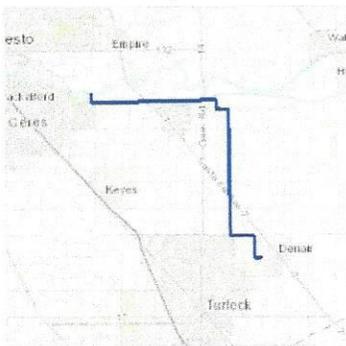
Project information

NAME

SRWA EIR

LOCATION

Stanislaus County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

Endangered species

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

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

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

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

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service.

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

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

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> There is final designated critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/1007	Threatened

Insects

NAME	STATUS
------	--------

Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened
---	------------

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
San Joaquin Orcutt Grass <i>Orcuttia inaequalis</i> There is final designated critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5506	Threatened

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> Northern California DPS https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> Southern California DPS https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> California Central Valley DPS https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> Central California Coast DPS https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> South-Central California Coast DPS https://ecos.fws.gov/ecp/species/1007#crithab	Final designated

Migratory birds

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

Any activity that results in the ~~take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct)~~ of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service³. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured. Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

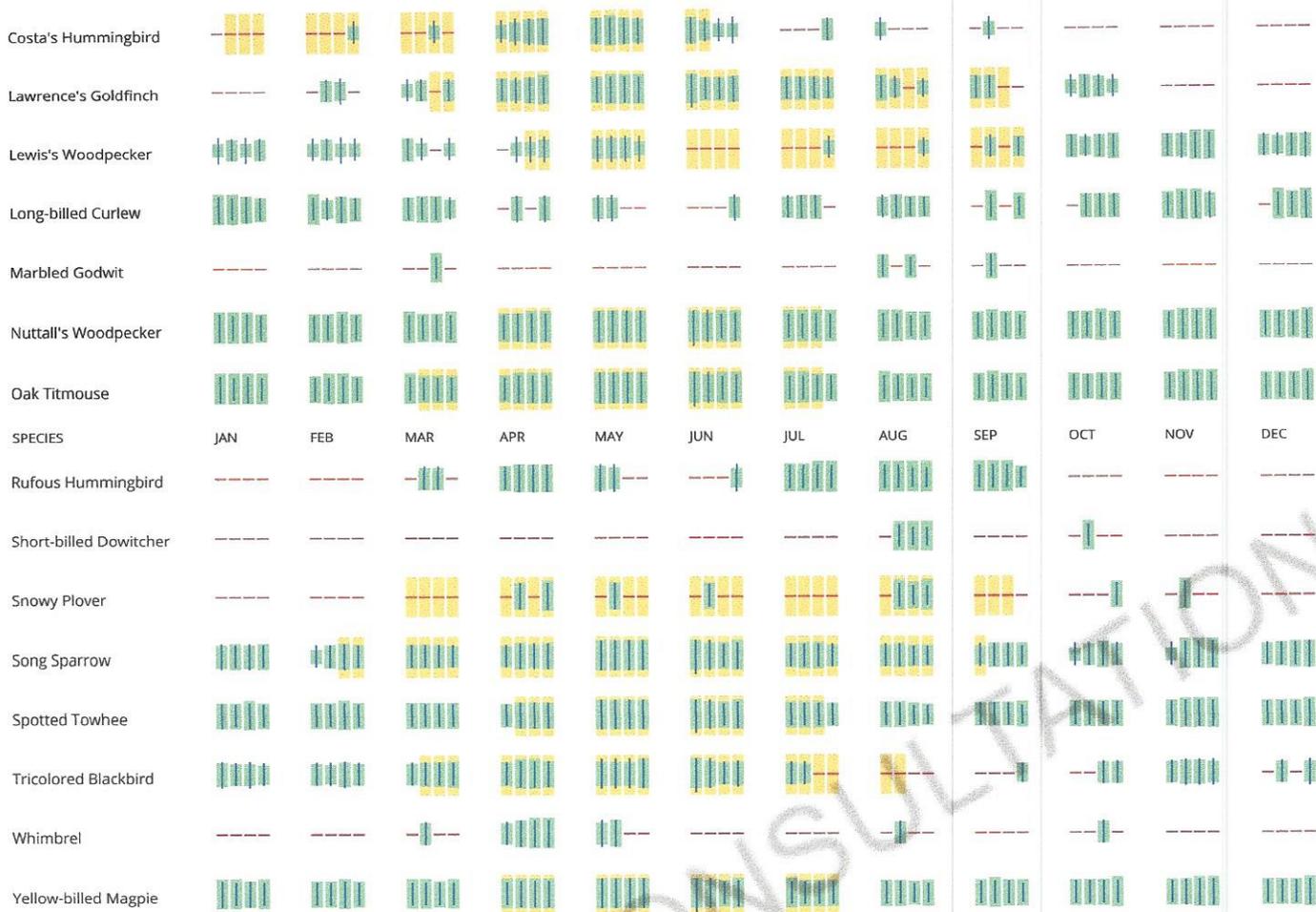
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are [USFWS Birds of Conservation Concern](#) that might be affected by activities in this location. The list does not contain every bird you may find in this location, nor is it guaranteed that all of the birds on the list will be found on or near this location. To get a better idea of the specific locations where certain species have been reported and their level of occurrence, please refer to resources such as the [E-bird data mapping tool](#) (year-round bird sightings by birders and the general public) and [Breeding Bird Survey](#) (relative abundance maps for breeding birds). Although it is important to try to avoid and minimize impacts to all birds, special attention should be given to the birds on the list below. To get a list of all birds potentially present in your project area, visit the [E-bird Explore Data Tool](#).

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
Black Swift <i>Cypseloides niger</i> https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Burrowing Owl <i>Athene cunicularia</i> https://ecos.fws.gov/ecp/species/9737	Breeds Mar 15 to Aug 31
California Thrasher <i>Toxostoma redivivum</i>	Breeds Jan 1 to Jul 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Costa's Hummingbird <i>Calypte costae</i> https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Lawrence's Goldfinch <i>Carduelis lawrencei</i> https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker <i>Melanerpes lewis</i> https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-billed Curlew <i>Numenius americanus</i> https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Nuttall's Woodpecker <i>Picoides nuttallii</i> https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird <i>selasphorus rufus</i> https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Snowy Plover <i>Charadrius alexandrinus</i>	Breeds Mar 5 to Sep 15



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Such measures are particularly important when birds are most likely to occur in the project area. To see when birds are most likely to occur in your project area, view the Probability of Presence Summary. Special attention should be made to look for nests and avoid nest destruction during the breeding season. The best information about when birds are breeding can be found in [Birds of North America \(BNA\) Online](#) under the "Breeding Phenology" section of each species profile. Note that accessing this information may require a [subscription](#). [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) that might be affected by activities in your project location. These birds are of priority concern because it has been determined that without additional conservation actions, they are likely to become candidates for listing under the [Endangered Species Act \(ESA\)](#).

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#). The AKN list represents all birds reported to be occurring at some level throughout the year in the counties in which your project lies. That list is then narrowed to only the Birds of Conservation Concern for your project area.

Again, the Migratory Bird Resource list only includes species of particular priority concern, and is not representative of all birds that may occur in your project area. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird entry on your migratory bird species list indicates a breeding season, it is probable the bird breeds in your project's counties at some point within the time-frame specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Facilities

Wildlife refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location overlaps the following wetlands:

OTHER

[PUSCx](#)

RIVERINE

[R2UBH](#)

A full description for each wetland code can be found at the National Wetlands Inventory website: <https://ecos.fws.gov/ipac/wetlands/decoder>

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Life Histories of Special-status Species

Life Histories of Special Status Species with Potential to Occur in the Project Area

PLANTS

There are CNDDDB occurrences of 5 special status plants within 5 miles of the Project area: Colusa grass (*Neostapfia colusana*), San Joaquin Valley orcutt grass (*Orcuttia inaequalis*), Greene's tuctoria (*Tuctoria greenei*), heartscale (*Atriplex cordulata* var. *cordulata*), and subtle orache (*A. subtilis*). These species are found in vernal pool or alkaline habitats, which do not occur in the Project area.

INVERTEBRATES

Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (VELB)

The valley elderberry beetle (federally threatened) is associated exclusively with its host plant elderberry (*Sambucus* spp.). Adult beetles of this subspecies feed and lay eggs on the elderberry shrubs in riparian communities of the Central Valley. After hatching, the larvae burrow into the stems of the tree where they will feed on the interior wood for the next one to two years. Pupae form and upon maturation, adults bore their way out of the stems, leaving a distinctive oval shaped exit hole. As the larvae and adults are rarely seen, these exit holes serve as the only evidence of this species' presence. After emergence from the stems, the adults remain in association with the elderberries, where they will feed on the elderberry foliage and eventually reproduce.

In reconnaissance surveys in fall 2016, elderberry shrubs with apparent bore holes were present in the project area. Blue elderberry stands occur on the embankment above the Tuolumne River channel around the site of the proposed pump station. Elderberries are also present along the edge of the access road, under Geer Road Bridge, and along the proposed pipeline route leading to Fox Grove Park and from the park leading to the proposed water treatment plant. VELB are presumed to be present in the area when bore holes are found.

FISH

Central Valley Fall-run Chinook salmon (*Oncorhynchus tshawytscha*)

The Central Valley fall-/late fall-run Chinook salmon ESU includes all populations in the Sacramento and San Joaquin River basins and their tributaries. Fall-run Chinook are the most abundant run in the Central Valley and are the principal run raised in hatcheries (Moyle, 2002). Chinook salmon are present in the Tuolumne River. Upstream migration begins in October and spawning activity peaks in November. Annual monitoring has occurred at the Tuolumne River Weir (RM 24) since 2009; net upstream passage of adults has ranged from 264 in 2009 to 3,664 in 2013 (FISHBIO 2016). The 2015 monitoring documented net upstream passage of 421 adults, the second lowest number since monitoring began (FISHBIO 2016). After spawning, the duration of egg incubation varies depending on water temperature and so generally extends over a 2- to 3-month period (November – January). Fry remain in the river until they undergo smoltification, a process that prepares them for life in the ocean. Smolt outmigration peaks between April and May. A small number of juveniles may potentially remain over the summer before outmigrating as yearlings, however there is little evidence of this occurring in the Tuolumne River (Stillwater Sciences 2013).

In a recent study, a total of 653 completed Chinook salmon redds were observed from October 2012

through April 2013 but only 7% (46) were observed below RM 32 (Stillwater Sciences 2013a). Overall, the 10 miles of the Tuolumne River between RM 22-34 has been estimated to support only 9-10% of total available spawning habitat for Chinook salmon based on modeling results and redd surveys conducted from 1981-2009 (Stillwater Sciences 2013b).

A large proportion of Chinook salmon in the Tuolumne River are of hatchery origin. A recent study analyzed an existing inventory of otoliths (calcium carbonate structures in the inner ear of fish, also called “earstones”) obtained from CDFW spawning surveys and escapement data across multiple years between 2000-2012 and found that 67% of sampled fish were of hatchery origin (Stillwater Sciences 2016). Across the years the proportion of hatchery origin fish ranged from 39 to 100%, and the study concluded that the proportion of hatchery fish has been increasing in recent years.

Steelhead Salmon [Central Valley DPS] (*Oncorhynchus mykiss irideus*)

The Central Valley Distinct Population Segment (DPS) steelhead was listed as threatened under the FESA (71 FR 834) in 2006. The designation includes all naturally spawned anadromous steelhead below natural and manmade impassable barriers in the Sacramento and San Joaquin rivers and their tributaries, excluding steelhead from San Francisco and San Pablo Bays and their tributaries but including two artificial propagation programs: the Coleman National Fish Hatchery, and the DFG Feather River Hatchery. Estimates of historical and recent mean run abundance are 1–2 million and approximately 3,600, respectively (NMFS 2014). Critical habitat for this species that includes the project area became effective September 2, 2005 (70 FR 52488).

Central Valley *O. mykiss* exhibit a continuum of life history forms from the resident form that live their entire lives within their natal stream to fish that migrate as far as the Delta before returning to their natal stream to the anadromous form that migrate out to the ocean and then later return to their natal stream. The ocean-dwelling anadromous form is called steelhead and the freshwater and Delta forms are commonly called resident rainbow trout. In the Tuolumne River, potential upstream migration of adult *O. mykiss* begins in December and spawning activity peaks in February and March (Stillwater Sciences 2012). Potential smolt outmigration occurs in March through May.

Central Valley may occur in small numbers in the Tuolumne River (NMFS 2014). Monitoring efforts conducted in the Tuolumne River since 1986 have detected *O. mykiss* almost exclusively within the 5 to 10 river miles below La Grange Dam (RM 52), as summarized by Stillwater Sciences (2012): in seine surveys from 2001-2011, no juvenile (<150 mm in length) *O. mykiss* were captured below RM 42.4; only one adult (>150 mm) *O. mykiss* has been identified at the Tuolumne River counting weir (RM 24) since 1997; only 27 *O. mykiss* (14 > 150mm and 13 < 150mm) were captured in rotary screw traps at RM 31.5 and only 1 juvenile and 2 adults captured below the Project area at RM 5.2 between 1999-2011: and snorkeling surveys conducted since 1986 are not conducted below RM 31.5 because a large majority of salmonids are observed only above RM 42. In a recent study, a total of 38 *O. mykiss* redds were observed from October 2012 through April 2013 and no *O. mykiss* spawning occurred downstream of RM 39 (Stillwater Sciences 2013d). Consequently, it is not clear that there is a self-sustaining population of anadromous Central Valley steelhead in the Tuolumne River; resident rainbow trout is considered to be the predominate lifehistory (Stillwater Sciences 2013c).

Water quality is a critical factor during the freshwater residence time with cool, clear, and well-oxygenated water needed for maximum survival (Moyle 2002). Juvenile steelhead (ages 1+ and 2+) occupy deeper water than fry and generally occupy habitat with large structures such as boulders, undercut banks, and large woody debris that provide feeding opportunities, segregation of territories, refuge from high water velocities, and cover from fish and bird predators (Moyle 2002).

Optimal spawning temperatures are 4-11°C. Emergent fry migrate into shallow water (<36 cm) areas such as the stream edge or low gradient riffles, often in open areas with coarse substrate.

The primary limiting factor for Central Valley steelhead is the inaccessibility of more than 95% of its historic spawning and rearing habitat due to major dams (NMFS 2014). Other limiting factors include small passage barriers, water development and land use activities, levees and bank protection, dredging and sediment disposal, mining, contaminants, fisheries management practices, hatcheries, inadequately screened water diversions, and predation by nonnative species.

Hardhead (*Mylopharodon conocephalus*)

Hardhead (state species of special concern) occur in the lower Tuolumne River and have been documented in the vicinity of the proposed project site by electrofishing, snorkeling, and rotary screw trap surveys conducted since 1990 (Stillwater Sciences 2012). Most recently, hardhead have been documented at the Tuolumne River Weir at RM 24.5, 1.5 miles west of the project area (FishBio 2016).

Hardhead are large cyprinids (minnows) native to the Sacramento and San Joaquin River basins. They are believed to be relatively intolerant of low oxygen levels and prefer deep pools in areas with slow water velocities and bottom substrates ranging from sand to boulders (Moyle *et al.* 1995). They forage for invertebrates and aquatic plant material in slow water. River-dwelling adult hardhead are typically found in the lower half of the water column, whereas juveniles primarily occupy shallow areas near the channel margins (Moyle *et al.* 1995). Hardhead become reproductive in their third year and are thought to spawn during April-May in gravel riffles in upstream areas; optimal stream temperatures are 24-28°C (Moyle 2002). A primary factor affecting hardhead populations is the introduction of predator fish (the smallmouth bass, in particular); another factor is habitat loss due to dams and diversions, which create unsuitable temperatures and flow regimes and eliminate upstream spawning grounds (Moyle *et al.* 1995).

Pacific Lamprey (*Entoshenus tridentata*)

Pacific lamprey (state species of special concern) occur in most coastal streams in California. In the Central Valley, this lamprey has been recorded in the San Joaquin River and in the Tuolumne River (Moyle 2002). Little is known of the oceanic life of California populations of Pacific lamprey, except that they parasitize blood and body fluids from a wide variety of larger fishes. After a period ranging from 1- 3 years, Pacific lamprey return to freshwater from late fall to spring (Goodman and Reid 2012). Lampreys are believed to spend about a year in the stream prior to becoming sexually mature and spawning in March to June the following year in gravel or gravel sand substrates on the upstream end of riffles or tails of pools (Stillwater Sciences 2014). Following egg release, the adults cover over the eggs with a layer of fine silt and die soon after spawning.

Eggs take several weeks to hatch, depending on water temperatures, and produce a larval form known as an ammocoete. Ammocoetes rear for another two to three weeks near the nest gravel before emerging and rising into the current and drifting downstream (Pletcher 1963). Ammocoetes use their tails to burrow into mud or sand in slow backwater areas such as pools and eddies where they live as filter feeders for 3 to 7 years (Goodman and Reid 2012).

Transformation of Pacific lamprey larvae to the young adult life stage takes approximately 2 months and young adult lamprey migration may occur over an extended period from late fall to spring (Goodman and Reid 2012). The main migration of young adults may be coincident with high

discharge in the spring (Goodman and Reid 2012). The Pacific lamprey has been observed in the Tuolumne River in snorkel surveys conducted between La Grange Dam (RM 52) and Waterford (RM 30) and lamprey ammocoetes (possibly Pacific lamprey) have also been captured in rotary screw trap operations at Waterford (Stillwater Sciences 2014).

AMPHIBIANS AND REPTILES

Western pond turtle (*Actinemys marmorata*)

The western pond turtle (state species of special concern) occurs along the Pacific Coast of North America from Baja California and into Washington and British Columbia. In California, western pond turtles inhabit up to 90% of its historic range but in dramatically reduced numbers in the Central Valley and west of the Sierra Nevada (Jennings and Hayes 1994). Western pond turtles are small to medium in size, with adults averaging 4.5-8.25 inches in shell length. From a distance, this species looks uniformly dark green or brown from head to tail. Upon closer inspection, the head and neck are flecked with khaki and brown markings.

Slow moving or slack water habitats, including ponds, lakes, rivers, streams, creeks, and marshes, are typical habitat for this species. Large amounts of vegetation, partially submerged logs, rocks, or open mud banks for basking are also a necessity. The diet of the western pond turtle is omnivorous ranging from aquatic plants, invertebrates, worms, amphibian eggs, crayfish, and fish. Nests are located upland, generally within 500 feet of the water. Western pond turtle nesting season spans from late May to early July.

The ruderal grassland occur on the embankment above the Tuolumne River at the site of the proposed pump station provides marginal nesting habitat for the western pond turtle due to its proximity to the freshwater Nazareno pond, which is adjacent to the Project area and provides suitable aquatic habitat for WPT. There are no CNDDDB occurrences within 5 miles of the Project site.

BIRDS

Burrowing owl (*Athene cunicularia*)

Burrowing Owls (species of special concern) historic range stretched throughout most of California, with the exception of the coastal counties north of Marin and mountainous regions (Grinnell and Miller 1944). The present-day range remains largely unchanged but local declines and extirpations have dramatically impacted species population. Burrowing owls are year-long residents in generally flat, open dry grasslands, pastures, deserts, and shrub lands. They use communal ground squirrel and other small mammal burrow colonies for nesting and cover, as well as artificial structures such as roadside embankments, levees, and berms. Nests are composed of sandy soil with minimal vegetation around, and are dug out by other small animals. They prefer open, dry, nearly level grassland or prairie habitat and can exhibit high site fidelity, often reusing burrows year after year. This species feeds on arthropods, small rodents, amphibians, reptile species, birds and carrion. Suitable habitat for this bird may be found along portions the pipeline alignments and roadside embankments and also along the canal right-of-ways. There are no CNDDDB records of this species within five miles of the Project site.

Swainson's hawk (*Buteo swainsoni*)

The Swainson's Hawk (state threatened) is a large raptor that breeds throughout much of the western U.S., Canada, and northern Mexico. Swainson's Hawk typically winter in South America (Woodbridge 1998), but there are reports of the species wintering in the Delta. In California, 95% of Swainson's Hawks are in the Central Valley (CDFG 2007) and about 85% of Swainson's Hawks nests in the Central Valley are within riparian forest or remnant riparian trees (Woodbridge 1998).

Swainson's Hawk was listed as a threatened species in the state of California in 1983 following a statewide survey conducted in 1979 that estimated a 90% reduction in historic numbers. The dramatic decline in population was attributed to loss of nesting habitat, pesticide use in wintering areas, and loss or adverse modifications of foraging habitat.

A 5-year review on the status of the species was completed in February 2016, that identified urbanization and conversion of farmland as a primary threat to populations due to the loss of suitable foraging and nesting habitat (CDFW 2016a). No change in status was recommended.

This species feeds on ground squirrels, voles, and other small mammal prey during the breeding season. At other times of the year insects such as grasshopper and crickets are the primary prey. In the Central Valley, nest sites are strongly associated with riparian forest vegetation despite not being an obligate riparian species (Woodbridge 1998). Riparian corridors adjacent to agricultural lands provide large trees suitable for nesting in close proximity to high-quality foraging habitats where nesting substrate is generally limited.

Breeding pairs lay between 1 and 4 eggs with an incubation period lasting 34-35 days (CDFW 2016). Chicks fledge from the nest 5-6 weeks after hatching, generally from the beginning of July to mid- to late-August (CDFW 2016). Successful breeding pairs display high partner and nest fidelity and often return to the same nest site the following year (Estep 1989). Swainson's hawks can forage as much as 10 miles from the nest.

Large trees along the Tuolumne River and mature ornamental trees in the Project vicinity provide suitable nesting sites for this species. Agricultural fields in the Project area provide preferred foraging habitat while ruderal grasslands provide low quality foraging habitat. There are four CNDDDB records of this species within five miles of the Project site and numerous observations in the project vicinity (eBird 2017).

White-tailed Kite (*Elanus leucurus*)

The White-tailed Kite (state fully protected) is a raptor reaching a total length of 15-17 inches and a wingspan of approximately 40 inches. Adults are a pale gray with white head, underside, and tail. The species feeds mostly on small rodents, but will occasionally consume birds, large insects, reptiles, and amphibians. White-tailed Kites prefer habitat near agricultural areas, shrubland, grasslands, meadows, or emergent wetlands. Nests are placed 20-100 feet above the ground near the top of dense oak, willow, or other tree stand (Thompson 1975). Habitat loss is the leading cause for decreasing White-tailed Kite numbers.

Riparian trees and mature ornamental trees within the Project vicinity provide suitable nesting sites for this species. Agricultural fields and ruderal grasslands in the Project vicinity provide foraging habitat. There are no CNDDDB records of this species within five miles of the Project site.

BATS

Townsend's big-eared bat (*Corynorhinus townsendii*)

Townsend's big-eared bat (proposed for listing under CESA, species of special concern) range is throughout California in a wide variety of habitats (CDFW 2015). This species is found in all but subalpine and alpine habitats and is mostly abundant in mesic areas (CDFW 2000). Colonies generally persist if left undisturbed. Diet consists mostly of moths and other relatively slow-moving flying insects. The Townsend's big-eared bat hunts using echolocation. This species is known to roost in caves, mines, tunnels, abandoned buildings and other structures, but is extremely sensitive to human disturbance and may desert roosts following a single human visit (CDFG 2000). Males are often solitary during the spring and summer while the females remain in maternity colonies fewer than 100 individuals (CDFG 2000). This species hibernate individually or in groups less than a few dozen.

The nearest CNDDDB occurrence was detected in 2012 at the Santa Fe Road Bridge over the Tuolumne River, three miles to the west of the proposed pump station site. The underside of the Geer Road bridge was visually surveyed for evidence of bat use (e.g., guano, staining, smells, or sounds) in December 2016 and March 2017; no sign of bat activity was observed. However, bat use of roost sites can vary seasonally

Western red bat (*Lasiurus blossevillii*)

The western red bat (species of special concern) is a medium-sized bat with adults weighing 0.2-0.5 ounces. Adults are reddish in color and have short, broad, and rounded ears with a short, plain nose. While in flight, a relatively long tail extends straight out giving the western red bat a distinctive silhouette against the sky as compared to other species (Barbour and Davis 1969). In California, the western red bat occurs from Shasta County to the Mexican border, west of the Sierra Nevada. Western red bats prefer to roost in forests and woodlands from sea level up through mixed conifer forests (CDFG 2000), roosting anywhere from 2-40 feet in trees near riparian corridors fields, or urban areas. Adults feed on a variety of insects, specifically moths, crickets, beetles, and cicadas, foraging over a variety of habitats, including grasslands, shrublands, open woodlands and forests, and croplands.

Riparian trees and mature ornamental trees within the Project vicinity provide suitable nesting sites for this species. Agricultural fields and ruderal grasslands in the Project vicinity provide foraging habitat. There are no CNDDDB records of this species within five miles of the Project site.

Pallid bat (*Antrozous pallidus*)

The pallid bat (species of special concern) is a locally common in California in low elevation habitats including deserts, grasslands, shrublands, woodlands & forests. The species is most common in open, dry habitats with rocky areas for roosting. In California, pallid bats are associated with oak woodlands at lower elevations. Pallid bats are primarily a crevice roosting species but may roost in a variety of places including tree cavities and man-made structures and are one of the species that is predictively associated with bridges. Roosts must protect bats from high temperatures and the species is very sensitive to disturbance of roosting sites. Pallid bats are year-round residents in the majority of their range, but may travel to hibernation sites and for post-breeding dispersal. Mating occurs in fall or winter and young are born in the spring and summer. Pallid bats feed on large insects usually taken from the ground.

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Appendix C
Cultural Resources Report

Technical Report

ARCHAEOLOGICAL INVENTORY REPORT
Stanislaus Regional Water Authority Surface Water
Supply Project
Stanislaus County, California
September 2017

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Limitations

This report contains confidential cultural resources location information; report distribution should be restricted to those with a need to know. Cultural resources are non-renewable, and their scientific, cultural and aesthetic values can be significantly impaired by disturbance. To deter vandalism, artifact hunting, and other activities that can damage cultural resources, the locations of cultural resources should be kept confidential. The legal authority to restrict cultural resources information is in California Government Code 6254.1 and the National Historic Preservation Act of 1966, as amended, Section 304.

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List of Acronyms

APE	area of potential effects
ATSF	Atchison Topeka Santa Fe Railroad
CCIC	Central California Information Center
CCR	California Code of Regulations
CCTS	Richard Beardsley's Central California Taxonomic System
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
Horizon	Horizon Water and Environment, LLC
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PRC	Public Resources Code
SRWA	Stanislaus Regional Water Authority
TCR	tribal cultural resource
TID	Turlock Irrigation District
USC	United States Code
WTP	water treatment plant

Executive Summary

The Stanislaus Regional Water Authority (SRWA) is preparing documentation in order to evaluate potential environmental effects of the proposed Surface Water Supply Project (proposed project or project), which seeks to provide a supplemental source of drinking water supply from surface water to meet existing and future community demands and to offset use of local groundwater supplies. This document discusses the results of efforts to identify and evaluate archaeological resources within the project study area for the treated water transmission mains for the proposed project. Archival research and pedestrian surveys identified no archaeological resources within the project study area.

This report has been prepared based on certain key assumptions made by Horizon that substantially affect its conclusions and recommendations. These assumptions are that the information gathered during the record search is up to date and accurate, and that the field survey results accurately identified the presence or absence of archaeological resources visible on the ground surface. These assumptions, although thought to be reasonable and appropriate, may not prove to be true in the future. Horizon's conclusions and recommendations are conditioned upon these assumptions.

No archaeological resources were identified during the course of the field survey, nor will any previously identified cultural resources be impacted by the proposed project. As a result, the project will not have an impact on significant cultural resources.

The archaeological inventory was performed based on information obtained at the Central California Information Center (CCIC) of the California Historical Resources Information System, as well as on direct observation of site conditions and other information generally applicable as of August 2017. The conclusions and recommendations herein are therefore based on information available up to that point in time. Further information may come to light in the future that could substantially change the conclusions found herein.

Information obtained from these sources in this timeframe is assumed to be correct and complete. Horizon does not assume any liability for findings or lack of findings based upon misrepresentation of information presented to Horizon or for items that are not visible, made visible, accessible, or present at the time of the project area inventory.

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1 Introduction

1.1 Location and Setting

The proposed project would be located in south-central Stanislaus County, within the larger San Joaquin Valley (**Figure 1**), in the flat farmland just south of the Tuolumne River. The proposed project would extend from near Fox Grove Regional Park in Hughson on the north to the cities of Ceres and Turlock on the west and south, respectively. The proposed project area is depicted on the Ceres and Denair 7.5' United States Geological Survey topographic quadrangles (**Figure 2**).

1.2 Project Description and Study Area

Municipalities in southern Stanislaus County (within the Turlock Irrigation District [TID] service area south of the Tuolumne River) meet their water supply needs through use of groundwater. For more than 30 years, water supply providers in this area have been collaborating to develop a reliable, supplemental source of drinking water supply from surface water to meet existing and future community demands and to offset use of local groundwater supplies, particularly during prolonged droughts. These collaboration efforts have resulted in the proposed project. The proposed project is overseen by SRWA, which was formed in 2011 as a joint powers authority comprising the Cities of Ceres and Turlock (Cities), and in partnership with TID.

The proposed project consists of the following facilities, depicted in **Figure 2**, which would deliver treated surface water to the Cities of Ceres and Turlock:

Infiltration Gallery and Wet Well: The infiltration gallery is an existing facility owned by TID, which was constructed in 2002–2003. Construction of the adjacent wet well facility was proposed by SRWA earlier in 2017 to assist with testing of the infiltration gallery.

Raw Water Pump Station: The pump station facilities would pull surface water from the Tuolumne River through the infiltration gallery and pump it through a transmission main to the water treatment plant (WTP).

Raw Water Transmission Main: A 60-inch transmission main would convey raw (untreated) water from the pump station to the WTP.

Water Treatment Plant: The WTP would treat surface water to meet state and federal drinking water standards for use by municipal and industrial customers in Ceres and Turlock.

Treated Water Transmission Mains: Following water treatment, 30- to 42-inch-diameter transmission mains would deliver “finished” (i.e., treated) water from the WTP to terminal facilities (i.e., tanks, pipelines, and pump stations) in Ceres and Turlock.

Terminal Facilities: Each City’s terminal facilities would consist of a storage tank, pump station, and pipelines and appurtenant facilities for water distribution. In Ceres, the storage tank would be located north of Hatch Road at the Ceres River Bluff Regional Park. In Turlock, the storage tank would be located east of North Quincy Road between East Zeering Road and East Monte Vista Avenue.

Project Study Area

The infiltration gallery and wet well, raw water pump station, and portions of the raw water transmission main were surveyed by an earlier environmental study that included those facilities (Horizon 2017), while the exact location of the WTP has not yet been determined. As a result, the study area for construction of new facilities reported herein is limited to the area of potential ground disturbance for the Turlock and Ceres treated water transmission mains (see **Figure 3**).

The composition of the current study area would be the area representing the excavation of the alignments for the finished water transmission water pipelines, which include a total of approximately 12 miles of pipe. The raw water transmission main would be a 60-inch-diameter pipeline installed at 5-feet in depth; the finished water transmission lines would be between 30 and 42 inches in diameter and also would be installed at around 5 feet in depth. Trenchless construction methods would be used at locations where typical open-cut installation methods are not feasible or where special construction methods are required by the permitting agency. Trenchless construction methods are anticipated at TID irrigation canal crossings, railroad crossings, major highway crossings, and selected intersections.

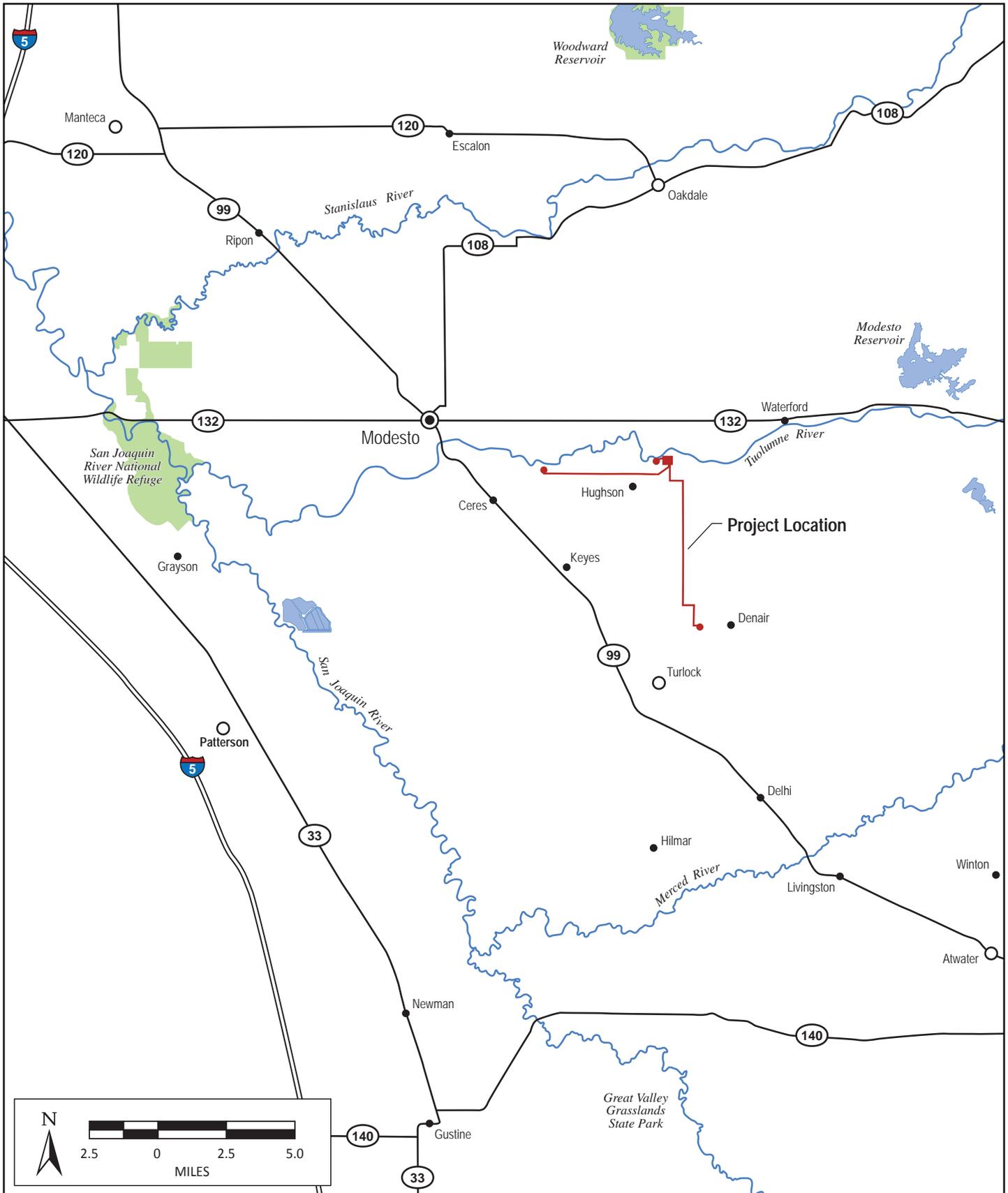


Figure 1.
Project Vicinity

Prepared by:



SRWA Surface Water Supply Project

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County: Stanislaus
 7.5' Quad Map: Ceres, Denair
 Township: 4.0 S
 Range: 9 E, 10.0 E
 Section: 1, 7, 8, 9, 12

UTM Coordinates (Zone 10N, NAD83)
Easting **Northing**
 685192 4164525

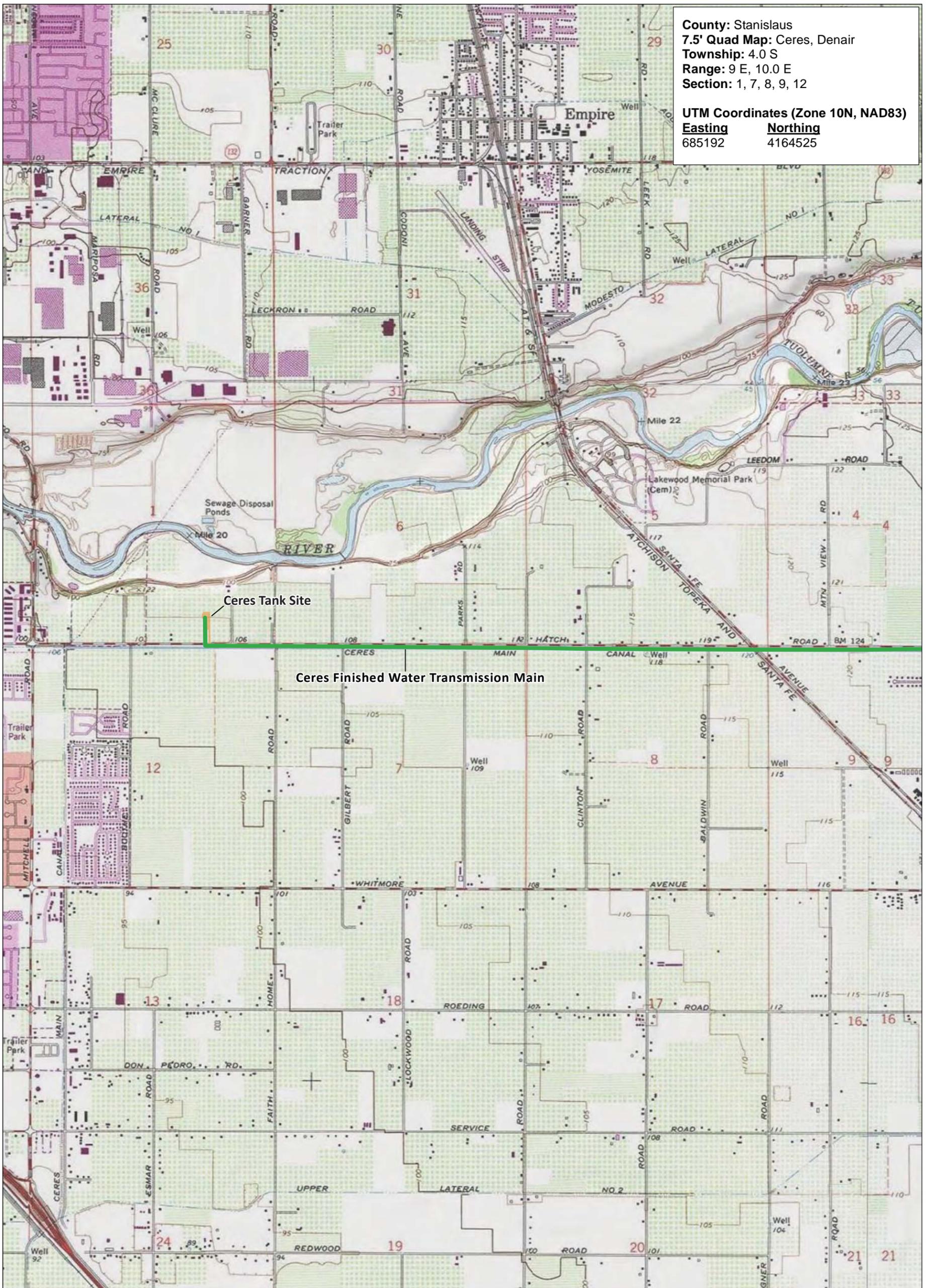
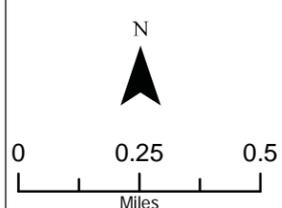


Figure 2. Project Location

Sheet 1 of 3



- Ceres Finished Water Transmission Main
- Raw Water Transmission Main
- Ceres Finished Water Transmission Main, Alternative A
- Ceres Finished Water Transmission Main, Alternative H
- Turlock Finished Water Transmission Main
- Infiltration Gallery Study Area
- Water Treatment Plant Study Area

County: Stanislaus
 7.5' Quad Map: Denair
 Township: 4.0 S
 Range: 10.0 E
 Section: 2, 3, 9, 10, 11, 12, 13, 14,
 23, 24
 UTM Coordinates (Zone 10N, NAD83)
 Easting: 690036 Northing: 4165332

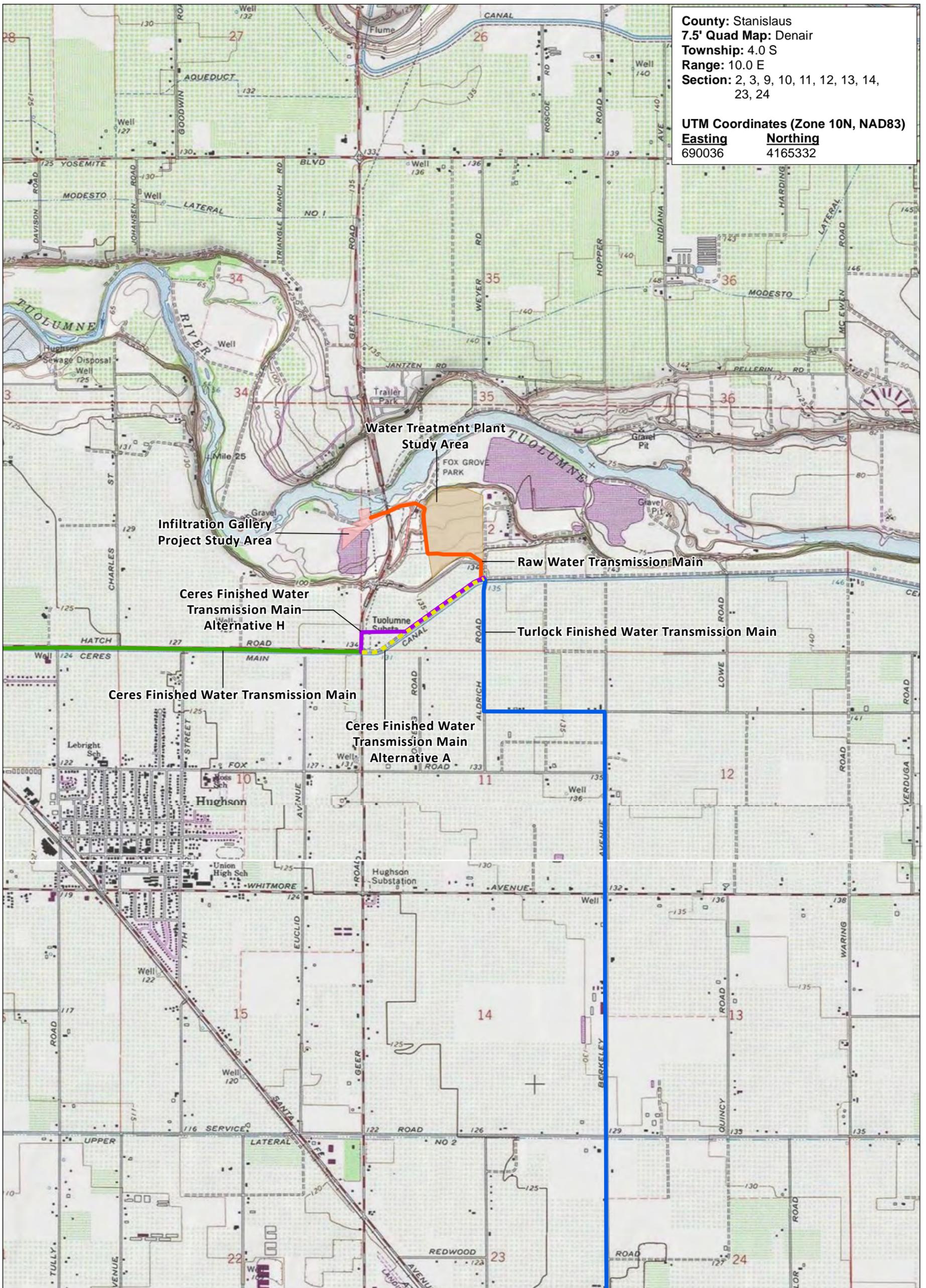
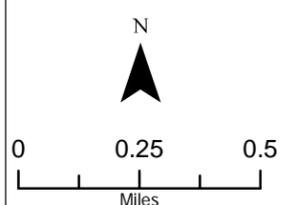


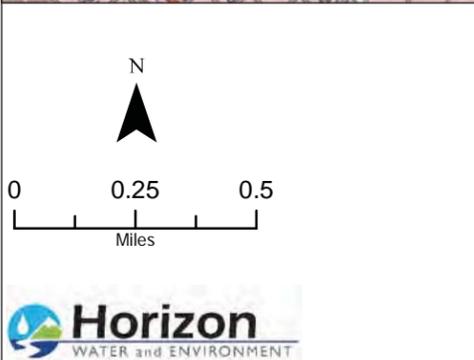
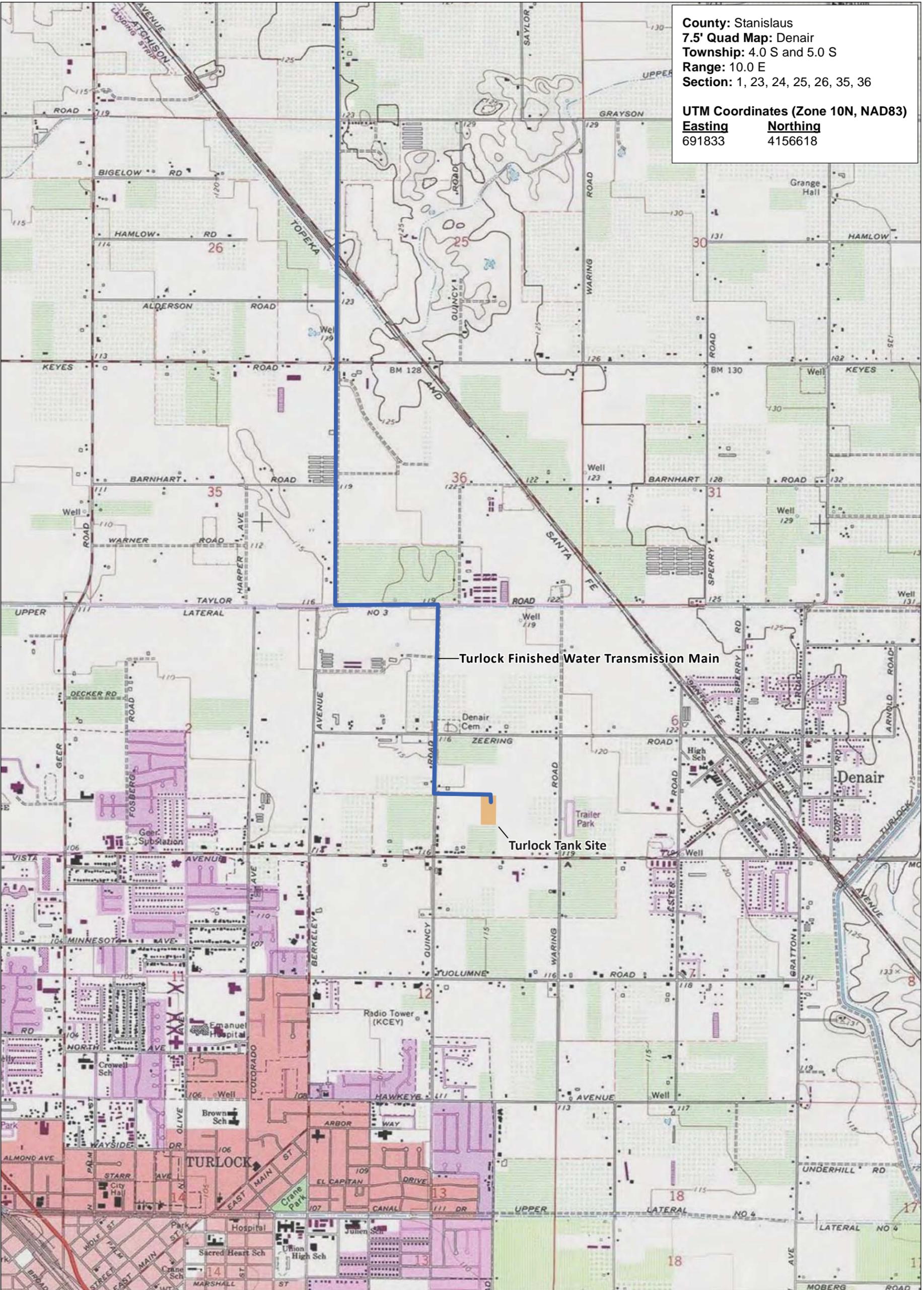
Figure 2. Project Location
Sheet 2 of 3



- Ceres Finished Water Transmission Main
- Raw Water Transmission Main
- Ceres Finished Water Transmission Main, Alternative A
- Ceres Finished Water Transmission Main, Alternative H
- Turlock Finished Water Transmission Main
- Infiltration Gallery/Raw Water Pump Station Study Area
- Water Treatment Plant Study Area

County: Stanislaus
 7.5' Quad Map: Denair
 Township: 4.0 S and 5.0 S
 Range: 10.0 E
 Section: 1, 23, 24, 25, 26, 35, 36

 UTM Coordinates (Zone 10N, NAD83)
 Easting: 691833
 Northing: 4156618



- Ceres Finished Water Transmission Main
- Raw Water Transmission Main
- Ceres Finished Water Transmission Main, Alternative A
- Ceres Finished Water Transmission Main, Alternative H
- Turlock Finished Water Transmission Main
- Infiltration Gallery Study Area
- Water Treatment Plant Study Area

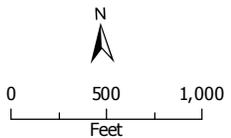
Project Location
 Sheet 3 of 3

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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



Project Alignments

- Ceres Finished Water Transmission Main
- Turlock Finished Water Transmission Main
- Railroad

Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.

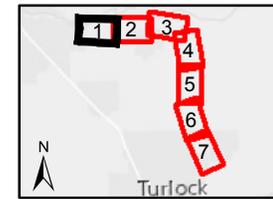
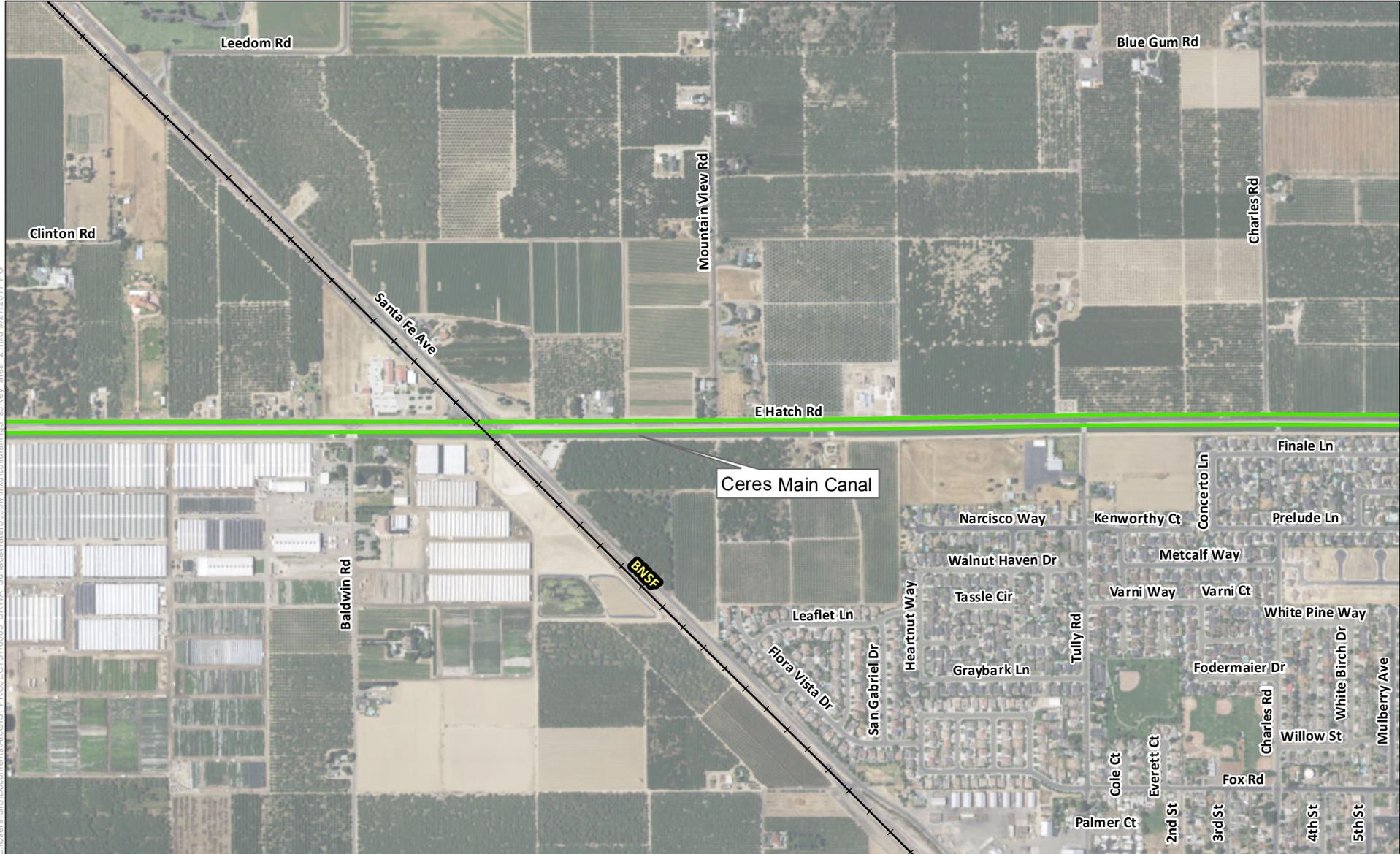


Figure 3
Project Study Area and APE
 Page 1 of 7

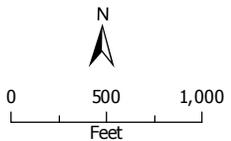
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 Surface Water Treatment Project:
 Archaeological Inventory Report





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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



Project Alignments

- Ceres Finished Water Transmission Main
- Turlock Finished Water Transmission Main
- + Railroad

Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.



Figure 3
Project Study Area and APE

Page 2 of 7

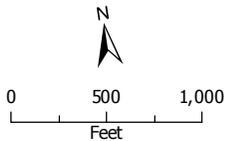
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Archaeological Inventory Report





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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



Project Alignments

- Ceres Finished Water Transmission Main
- Turlock Finished Water Transmission Main

Ceres Finished Water Main Alts

- - Alternative A
- Alternative H

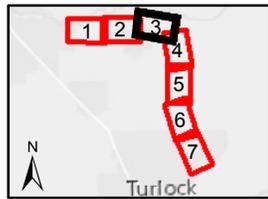


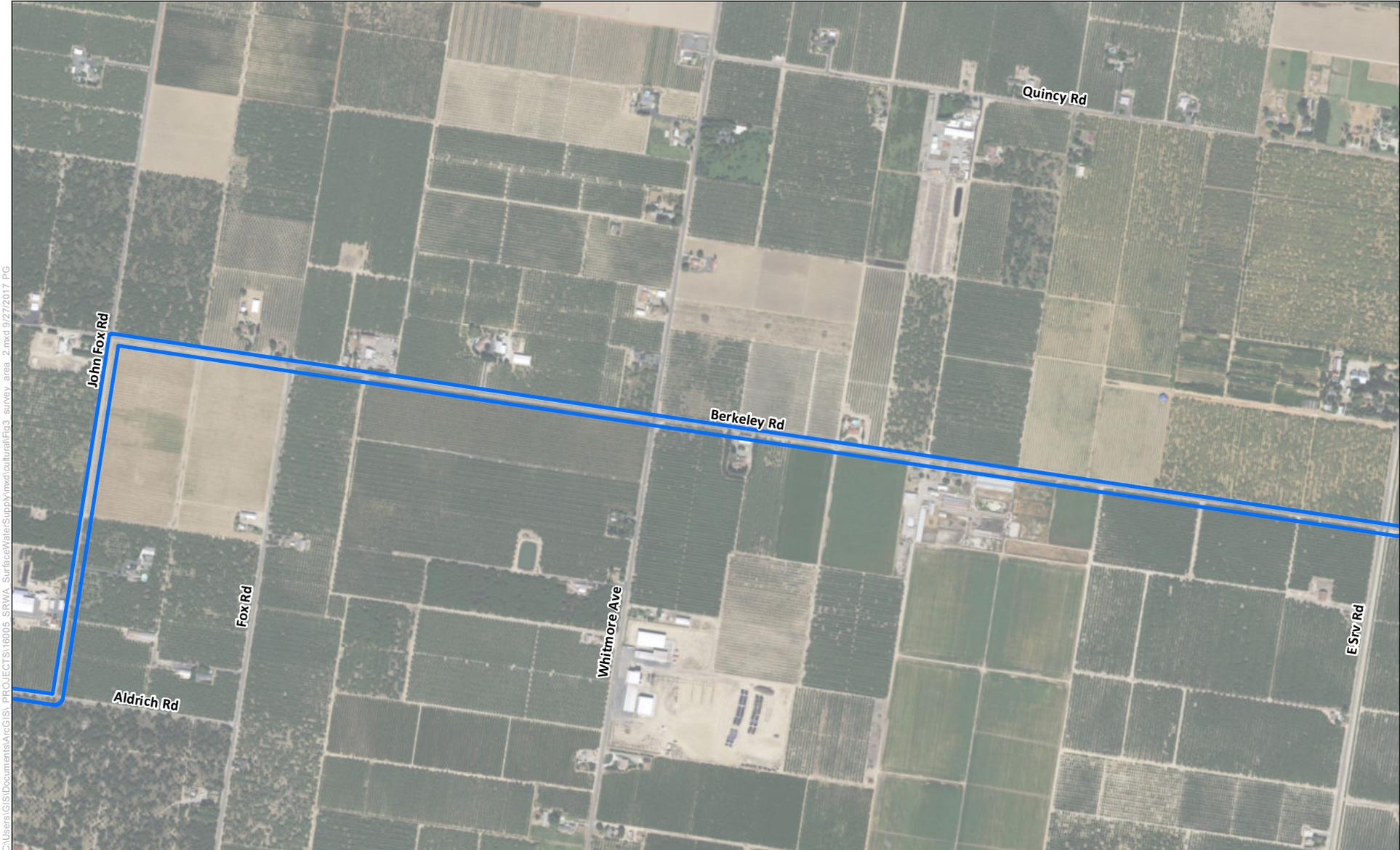
Figure 3
Project Study Area and APE
 Page 3 of 7

Stanislaus Regional Water Authority
 Surface Water Treatment Project:
 Archaeological Inventory Report



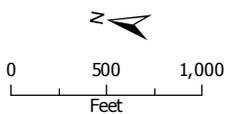
Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.



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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



Project Alignments

- Ceres Finished Water Transmission Main
- Turlock Finished Water Transmission Main

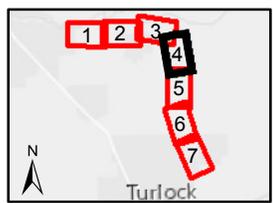


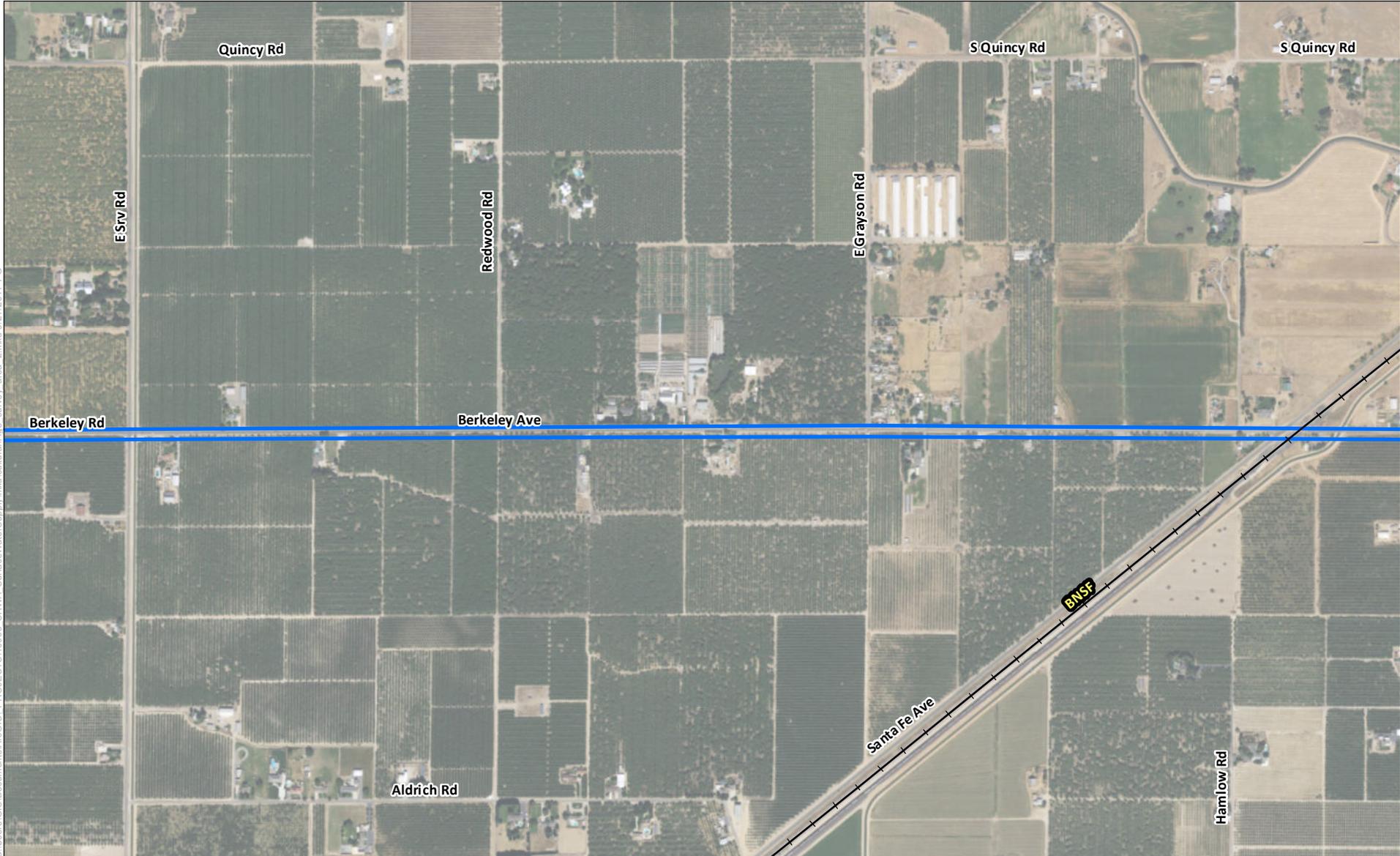
Figure 3
Project Study Area
 Page 4 of 7

Stanislaus Regional Water Authority
 Surface Water Treatment Project:
 Archaeological Inventory Report



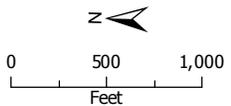
Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.



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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



Project Alignments

- Ceres Finished Water Transmission Main
- Turlock Finished Water Transmission Main
- Railroad

Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.

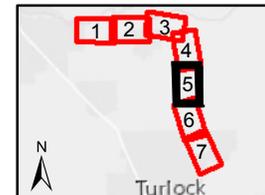
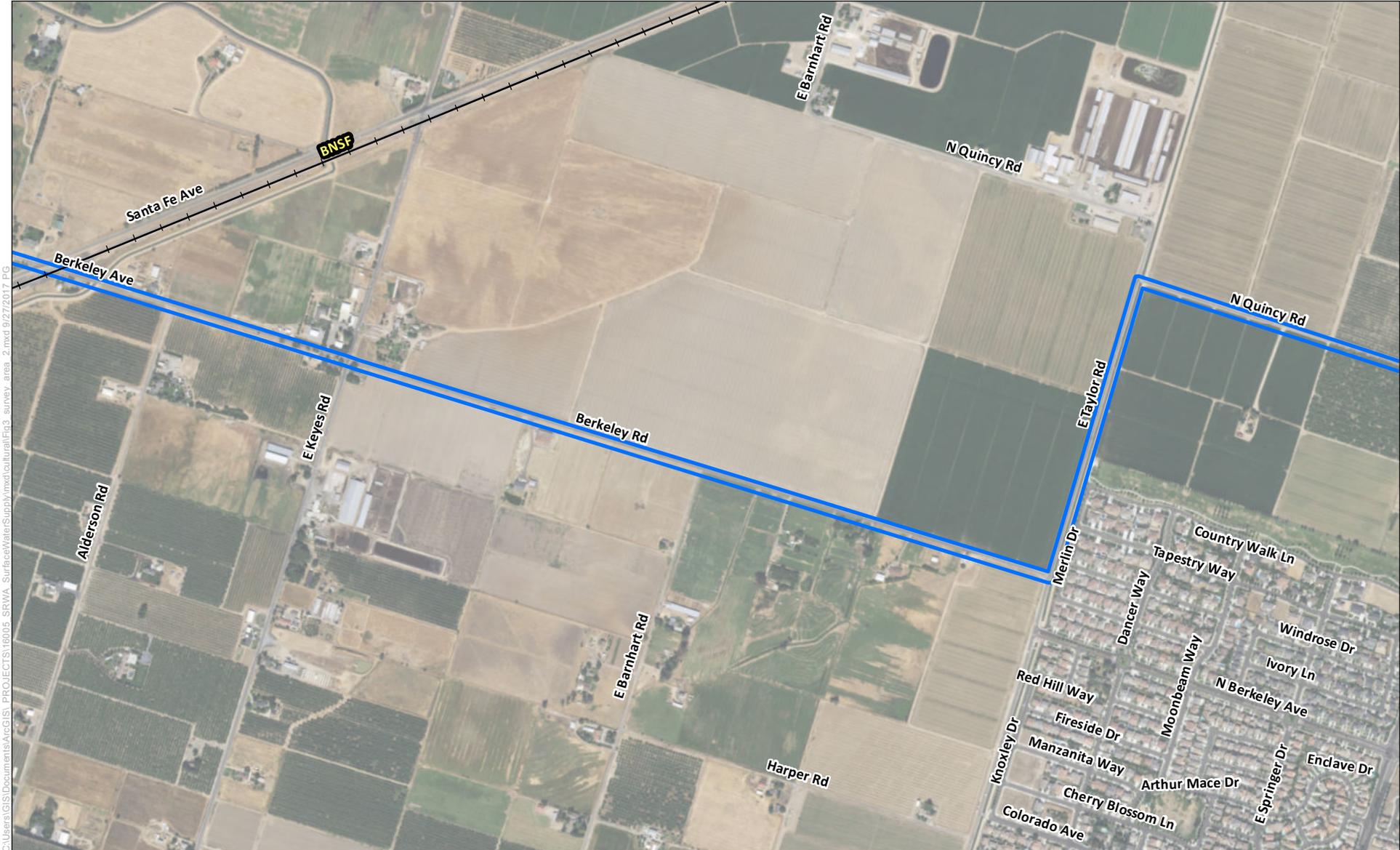


Figure 3
Project Study Area
 Page 5 of 7

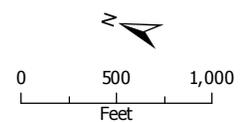
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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



- Project Alignments**
- ▬ Ceres Finished Water Transmission Main
 - ▬ Turlock Finished Water Transmission Main
 - Railroad

Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.

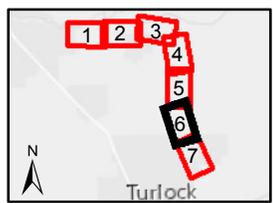
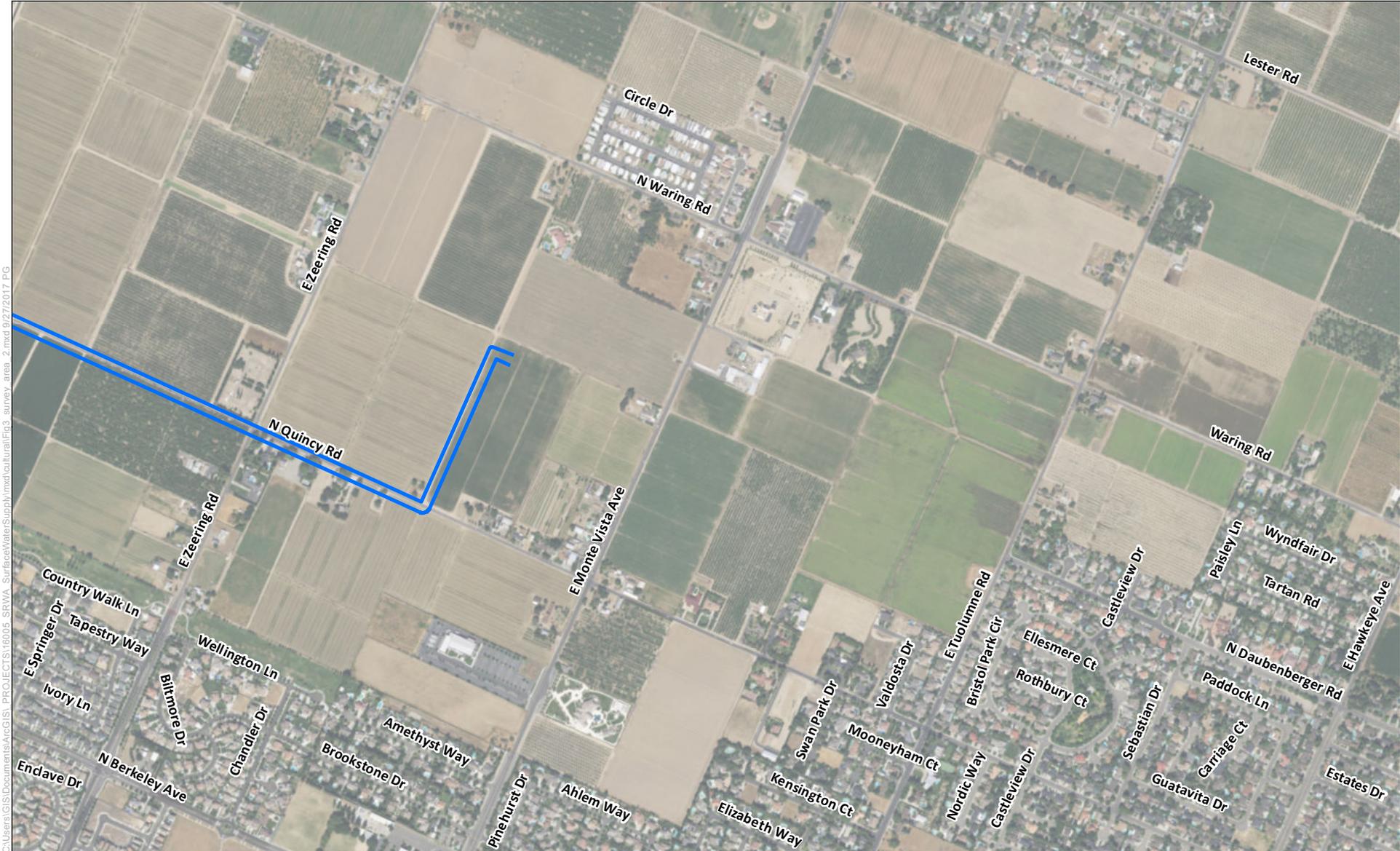


Figure 3
Project Study Area
 Page 6 of 7

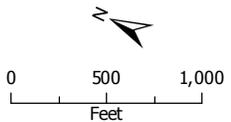
Stanislaus Regional Water Authority
 Surface Water Treatment Project:
 Archaeological Inventory Report





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BaseMap Sources: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap



Project Alignments

- Ceres Finished Water Transmission Main
- Turlock Finished Water Transmission Main

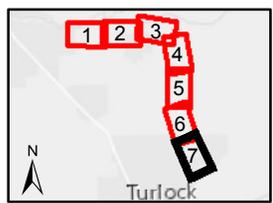


Figure 3
Project Study Area
 Page 7 of 7

Stanislaus Regional Water Authority
 Surface Water Treatment Project:
 Archaeological Inventory Report



Source: SRWA, 2016.

Note: The alignments depicted represent the area surveyed as described in the document.

1.3 Regulatory Setting and Need for Study

1.3.1 State of California Regulations

CEQA and State CEQA Guidelines

The proposed project must comply with California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 et seq. and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3), which determine, in part, whether the project has a significant effect on a unique archaeological resource (per PRC 21083.2) or a historical resource (per PRC 21084.1).

CEQA Guidelines CCR 15064.5 notes that “a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.” Lead agencies are required to identify potentially feasible measures or alternatives to avoid or mitigate significant adverse changes in the significance of a historical resource before such projects are approved. According to the CEQA guidelines, historical resources are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (per PRC 5024.1(e));
- Included in a local register of historical resources (per PRC 5020.1(k)) or identified as significant in a historical resource survey meeting the requirements of PRC 5024.1(g); or
- Determined by a lead state agency to be historically significant.

CEQA Guidelines CCR 15064.5 also applies to unique archaeological resources as defined in PRC 21084.1.

Assembly Bill 52, which went into effect on July 1, 2015, requires, per PRC 21080.3.1, that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project, if so requested by the tribe, and if the agency intends to release a negative declaration, mitigated negative declaration, or environmental impact report for a project. The bill also specifies, under PRC 21084.2, that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is considered a project that may have a significant effect on the environment. This latter language was added to the CEQA checklist in September 2016. SRWA, as the project’s CEQA lead agency, consulted with Native American tribes pursuant to PRC 21080.3.1.

As defined in Section 21074(a) of the PRC, TCRs are:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. Included or determined to be eligible for inclusion in the CRHR; or
 - b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

- (2) 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 Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074(b) and (c) as follows:

- (b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
- (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to the newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

California Register of Historical Resources

PRC Section 5024.1 establishes the California Register of Historical Resources. This register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed, or determined to be eligible for listing, in the NRHP, including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

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

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

1.3.2 Federal Regulations

Construction of the proposed project by ACWD will require a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers. As a result, the project constitutes a federal undertaking as defined by Title 54 United States Code (USC) Section 300101 of the National Historic Preservation Act (NHPA) and mandates compliance with 54 USC Section 306108, commonly known as Section 106 of the NHPA and its implementing regulations found under Title 36 of the Code of Federal Regulations

(CFR) Section 800, as amended in 2001. To comply with Section 106 of the NHPA, the project proponent must “take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.”

The implementing regulations of the NHPA require that cultural resources be evaluated for NRHP eligibility if they cannot be avoided by an undertaking (proposed project). To determine site significance through application of NRHP criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in Title 36 CFR Section 60.4, “the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association” and must be considered within the historic context. Resources must also be at least 50 years old, except in rare cases, and, to meet eligibility criteria of the NRHP, must:

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

For archaeological sites evaluated under criterion (D) above, integrity requires that the site remain sufficiently intact to convey the expected information to address specific important research questions.

Cultural resources also may be considered separately under the National Environmental Protection Act per Title 42 USC Sections 4321 through 4327. These sections require federal agencies to consider potential environmental impacts and appropriate mitigation measures for projects with federal involvement.

1.4 Personnel

Field work, analysis, and reporting were carried out by the below-listed professionals who meet the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (per Title 48 of the CFR, Section 44716, as amended in 1983). Procedures complied with NHPA Section 106 as set forth in Title 36 of the CFR, Section 800.

- **Dean Martorana, Registered Professional Archaeologist** (Horizon), holds a master’s degree in anthropology from California State University, Long Beach. He served as the lead archaeologist on the project. Mr. Martorana has 15 years of experience in both historic and prehistoric archaeology, including 10 years of experience in cultural resources management in northern California.
- **Eric Durksen, B.A.** (Horizon), received a bachelor’s degree in 2017 from California State University, Sacramento in Anthropology with a specialization in Archaeology. He has 7 years

of experience as a field technician and field crew member on a number of archaeological projects throughout California and Oregon.

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2 Project Context

2.1 Environmental Setting

The project area is located near the east edge of the northern San Joaquin Valley in what is often referred to as the Great Central Valley geomorphic province (Moratto 2004). The project area and valley are underlain by deep alluvial soils derived by erosion from the Sierra Nevada mountain range that rises to the east. The Tuolumne River, at the north edge of the project study area, is one of the many rivers that flow westerly out the mountains, bringing and depositing the eroded sediments. The project area decreases slightly in elevation from east to west, averaging approximately 125 feet above mean sea level.

Natural vegetation in the region would have consisted of plants associated with a Lower Sonoran grassland, or California prairie. The sea of tall grasses was broken only by groves of majestic Valley Oaks, and along the riparian corridors of the rivers and streams that supported dense woodlands of cottonwood, ash, sycamore, box elder, will, wild grape and blackberry, and elderberry that harbored an abundance of endemic wildlife and plant species. The San Joaquin Valley is now a vast agricultural region with a marked reduction of native habitats and the associated populations of plants and wildlife. Today the project area is almost exclusively agriculture, consisting primarily of nut orchards.

2.2 Prehistoric Context

Very little archaeological work has been conducted in the Modesto area, or in the San Joaquin Valley in general; therefore, the archaeology of the project area is understood within the prehistoric context developed for the Central Valley. Since the early 1930s a number of schemes have been set forth by researchers to organize the archaeological data of California into a chronological framework. The Central Valley sequence established by Lillard, Heizer and Fenenga in 1939 is particularly notable. Based on archaeological investigations in the lower Sacramento Valley, Lillard et al. divided human prehistory into three broad cultural horizons: Early, Middle, and Late. This chronology was first known as the Delta sequence and later became the basis of Richard Beardsley's Central California Taxonomic System (CCTS) (Moratto 2004:181). The system relies on the identification of certain characteristics such as burial patterns, shell bead types, stone tools, and even where the sites tend to occur. These traits and characteristics are used to place an archaeological resource in a specific time period. The CCTS has continued to undergo significant refinement but remains the framework within which California archaeologists explain cultural change. The general system is still widely used by archaeologists, but it has been expanded and revised to include economic and technological strategies, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods. The current chronology (Rosenthal et al. 2010:150) for Central California archaeology includes:

- Paleo-Indian: 11,550 to 8550 B.C.
- Lower Archaic: 8550 to 5550 B.C.
- Middle Archaic: 5550 to 550 B.C.
- Upper Archaic: 550 B.C to 1100 A.D.

- Emergent: 1100 A.D. to Historic

The Paleo-Indian Period (11,550 to 8,550 B.C.) is generally characterized by big-game hunters occupying broad geographic areas. However, archaeological deposits from the Paleo-Indian period are rarely found in the Central Valley and those that have been identified have largely been discovered at the south end of the San Joaquin Valley near Tulare Lake. Post-depositional processes, mainly glacial outwash occurring at the end of the Pleistocene either destroyed or deeply buried much of the existing evidence of human activity in the region from this time period. As result, little is known about Paleoindian lifeways in the region. (Moratto 2004:214).

Similar to the preceding period, the Lower Archaic Period (8550 to 5550 B.C.) is presumed to reflect a mobile population who continued to hunt big game. There are few localities in the Central Valley associated with this period, and those that have been found are largely isolated artifacts consisting of large wide-stemmed and leaf-shaped projectile points, along with flaked stone crescents. Only two sites with associated deposits of faunal and shell remains have been identified for the Lower Archaic; one at Buena Vista Lake in the southern San Joaquin Valley (Rosenthal, et al. 2010: 151-152) and one in Sacramento (Tremaine 2008). Some sites in the Sierra Nevada foothills from this period, however, indicate the use of milling equipment (hand stones and milling stones) to process seeds and nuts.

The Middle Archaic Period (5550 to 550 B.C.) indicates a shift to a more settled way of life that is reflected by substantial, though often deeply buried, archaeological sites with artifacts that are more elaborate in design, infer a more diverse subsistence regime, and indicate interregional trade. Sites are often situated along the major rivers and streams within the Central Valley, emphasizing a focus on riverine and marsh habitats. The Windmill Tradition or Pattern, which was first identified in sites around the Sacramento-San Joaquin River Delta, is often considered representative of this period. Characteristic artifacts from this period include a variety of fish hooks and spears; large stemmed and leaf-shaped projectile points of obsidian and chert; shaped charmstones of alabaster, steatite, or marble; and a variety of Haliotis and Olivella shell ornaments and beads, respectively. Mortars and pestles, associated with acorn preparation, become commonplace by the middle of the period. The presence of ventrally and dorsally extended burials, with a western orientation is particularly indicative of the Windmill Pattern.

Increased sedentism and technological specialization are evidenced during the Upper Archaic Period (550 B.C to 1100 A.D.) as populations exploited more diverse resources and established trade relationships. Mortars and pestles became the primary ground stone implements, suggesting that acorns had become a more important dietary staple. Regional diversity in artifact styles, such as Haliotis shell ornaments, bone tools, and ground charmstones or plummetts become more pronounced; burial postures are also varied.

Archaeological sites from the Emergent Period (A.D. 1100 to the historic-period) indicate increased social complexity, and the development of large, central villages with resident political leaders and specialized activity sites. Enhanced regional diversity in terms of artifact styles, housing, and interment methods is evident in the archeological record. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a variety of shell and stone beads and ornaments.

2.3 Ethnohistoric Context

The Modesto area lies within the ancestral territory of the Northern Valley Yokuts. “Yokuts” is a term applied to a large and diverse number of people inhabiting the San Joaquin Valley and Sierra Nevada foothills of central California. The Northern Valley Yokuts inhabited a 40- to 60-mile-wide area straddling the San Joaquin River, south of the Mokelumne River, east of the Diablo Range, and north of the sharp bend that the San Joaquin River takes to the east-northeast near Mendota in Fresno County. The Southern Valley Yokuts occupied the San Joaquin Valley south of the bend in the river. Although they were divided geographically and ecologically, the two Yokuts divisions have a common linguistic heritage (Wallace 1978:462).

The Northern Valley tribes closely resembled the Yokuts groups to the south, although there were some cultural differences. The northerners had greater access to salmon and acorns, two important dietary resources, than the Southern Yokuts, and some of their religious practices reflected the influences of groups to their north, such as the Miwok. While inhumation was the usual practice in the southern valley, the Northern Valley Yokuts either cremated their dead or buried them in a flexed position (Wallace 1978:464, 468). A chief headed the tribal villages, which averaged around 300 people. Family houses were round or oval in shape, sunken, with a conically shaped pole frame, and covered with tule mats. Each village also had a lodge for dances and other community functions, as well as a sweathouse (Wallace 1978:462-464).

The Northern Valley Yokuts built their riverside villages on elevated areas along the water’s edge to avoid the spring floods, which were a result of heavy Sierra Nevada snow melts. Living beside rivers and streams provided plentiful river perch, Sacramento pike, salmon, and sturgeon. Hunting provided waterfowl such as geese and ducks as well as terrestrial animals such as antelope, elk, and brown bear, although by all indications, fish constituted a majority of the diet. The surrounding woodland, grasslands, and marshes provided acorns, tule root, and seeds.

The Northern Valley Yokuts used bone harpoon tips for fishing, stone sinkers for nets, chert projectile points for hunting, mortars and pestles, scrapers, knives, and bone awl tools to procure and process food. Marine shells, procured from coastal tribes, were used for necklaces and other adornments, and marine shell beads sometimes accompanied the deceased. They used tule reed rafts to navigate the waterways for fishing and fowling. The Yokuts also manufactured a range of intricate baskets for a variety of purposes, including storing, cooking, eating, winnowing, hopper mortars, the transport of food materials, and ritual. Very little is known of the Northern Valley Yokuts’ clothing, but drawings of their tattoos show that they served not only as a decoration but also as a form of identity (Wallace 1978:464).

Initially, the Diablo Range served as a natural barrier against heavy recruitment of Native Californians by the Spanish, who established missions along the coast. However, by the early 19th century, Spanish, and later, Mexican missionaries began to explore the inner valleys in search of potential neophytes. The Yokuts resisted recruitment and California Indians from a variety of tribes sought refuge among the Yokuts after fleeing the missions. Introduced diseases, destruction of traditional resources from cattle grazing, and forced relocation took a heavy toll on the Northern Yokuts. Despite decades of hardship, many individuals who can trace their ancestry to the Northern Valley Yokuts continue to live and thrive in the Central Valley, and throughout California and the United States.

2.4 Historic-Era Context

The historic era began in Stanislaus County when the first Spanish expedition entered the San Joaquin Valley in 1806 under the leadership of Gabriel Moraga. Traveling north and northwest through the region in search of possible mission sites, Moraga's party explored along what came to be known as the Stanislaus River. Moraga visited the area again in 1808 and 1810 (Kyle et al. 2002:516-517).

After Mexico gained its independence from Spain in 1822, two additional expedition forces entered the area; however, the purposes of their campaigns were no longer exploratory. Soldiers were sent into the Central Valley to recover stolen animals and punish hostile Indians in order to reduce the attacks upon coastal towns, missions, and ranchos.

Americans also began to enter the region during the Mexican period. In 1827 and 1828, Jedediah Smith entered the San Joaquin Valley through the Tejon Pass and trapped beavers along the San Joaquin and Kings Rivers, as well as other rivers and streams that flowed from the Sierra Nevada. Smith was followed by fellow trappers, including Peter Ogden, Ewing Young, Kit Carson, and Joseph Walker.

The first permanent European settlement in Stanislaus County may have occurred when two land grants were issued by the Mexican government in 1843. The first was the Rancho El Pescadero on the west side of the San Joaquin River near the border of what would eventually become San Joaquin County. The second was the Rancheria del Rio de Estanislao located north of the Stanislaus River bordering Tuolumne County. Two additional land grants were issued the following year. These were the Rancho del Puerto and Rancho Orestimba, both of which were on the west side of modern-day Stanislaus County near Rancho El Pescadero.

Anglo-Americans started to arrive in the territory that would become Stanislaus County during the Gold Rush, both as miners seeking gold and as agricultural entrepreneurs who recognized the opportunity to raise livestock or grow food for the gold seekers. As early as 1849, the town of Adamsville was founded on the south bank of the Tuolumne River just east of present-day Modesto. It became the first county seat of Stanislaus County in 1854 but was replaced by Empire, a short distance upriver, soon thereafter (Kyle et al. 2002).

During the historic era, the project area was agricultural, and it has remained so. Turlock was part of a large wheat operation owned by John W. Mitchell, until he founded the City in 1871. Similarly, Hughson was originally a 2,080-acre ranch operated by Hiram Hughson, until the town was laid out and subdivided into small farms after the property was purchased in 1907. Ceres, Hickman, and Waterford are other small farming communities along the Tuolumne River in the project area that have persisted since the mid-1800s (Tinkham 1921). Although grains and cattle were among the most profitable commodities during the early years of settlement in Stanislaus County, today agriculture is dominated by nut crops, dairying, cattle, and poultry production; a variety of beans are the most profitable field crops in the county (Stanislaus County Agricultural Commissioner 2015).

3 Native American Consultation and Archival Research

In accordance with the Secretary of the Interior’s Standards and the Guidelines for Archaeology and Historic Preservation (Title 48 CFR Section 44716 [amended 1983]), the goals of this archaeological inventory were to identify and completely document the location, qualities, and condition of any potential historic properties in the project’s APE. Methods employed to achieve these goals follow.

3.1 Native American Consultation

As discussed in Section 2.3, the proposed project is in the traditional ancestral territory of the Northern Yokuts. None of the Native American tribes in the project area have submitted letters of interest to the SRWA pursuant to PRC Section 21080.3.1(b)(1); however, in the spirit of PRC Section 21080.3.1, the SRWA notified local tribes identified by the Native American Heritage Commission as having a traditional and cultural association with the project area about the project via letters dated February 14, 2017. The SRWA did not receive requests for formal consultation under PRC Section 21080.3.1(b)(2) from any of those contacted. Follow-up phone calls were made to Chairpersons Perez and Martin on April 7, 2017, to confirm receipt of the notification letters. **Table 1** lists all those contacted and summarizes the results of the consultation. All correspondence with tribes related to PRC Section 21080.3.1 is provided in **Appendix A**.

Table 1. Native American Consultation

Organization/Tribe	Name of Contact	Letter Date	Comments
Ms, Katherine Erolinda Perez, Chairperson	North Valley Yokuts Tribe	02/14/2017	A follow-up phone call was made on 04/07/2017; a message was left on Chairperson Perez’s voicemail.
Ms. Lois Martin, Chairperson	Southern Sierra Miwuk Nation	02/14/2017	A follow-up phone call was made on 04/07/2017. Chairperson Martin confirmed that her tribe did not want to consult on the project.

3.2 Archival Research

Two record searches were conducted by the Central California Information Center (CCIC) of the California Historical Resources Information System (CHRIS), located at California State University at Stanislaus (Appendix B). The first was conducted in November 2016 (CCIC File No. 10088N) specifically for the infiltration gallery and wet well. The second was conducted in March 2017 (CCIC File No. 10236N) for the proposed water treatment plant and the pipeline routes. The purpose of the record searches was to identify the presence of any previously recorded cultural resources within the proposed project’s study area and to determine if any portions of the project site had previously

been surveyed for cultural resources. The record search for the project study area encompassed the project area and a ½-mile study radius around the project area.

The record search found that 13 cultural resources studies had previously been conducted within the proposed project study area, as listed in **Table 2**. Another 10 studies (not listed) have been conducted within ½ mile.

Table 2. Previous Cultural Resources Studies in the Project Study Area

CCIC No.	Author(s)	Year	Title
ST-00859	D. Chavez	1976	An Archaeological Reconnaissance of the Robert's Ferry Reservoir and Water Extraction and Conveyance Systems, Stanislaus County, California: Phase II
ST-00925	Peak & Associates	1979	Cultural Resource Assessment of the Hughson Wastewater Treatment Facilities Stanislaus County, California
ST-01451	L. K. Napton	1992	Cultural Resources investigation of the Proposed Livingston Cogeneration Project, Merced and Stanislaus Counties, California
ST-01793	L. K. Napton	1992	Cultural Resource Investigations of the Proposed Livingstone Cogeneration Project, Merced and Stanislaus Counties, Addendum 1: New Alternative to MID 115KV Transmission Routes Stanislaus County, California
ST-02930	P. Jensen	1996	Archaeological Inventory Survey; Tracy to Fresno Longhaul Fiberoptics Data Transmission Line, Portions of Fresno, Madera, Merced, Stanislaus, and San Joaquin Counties, California
ST-03569	S. Davis-King	1998	Historic Properties Survey Report for the Tuolumne River Restoration Project (Special Run Pools 9 & 10 and Gravel Mining Reach) Stanislaus County, California
ST-04176	E. Derr	2000	Turlock Irrigation District: Infiltration Gallery Project EA/IS/MND. Turlock Irrigation District, Stanislaus County
ST-04504	S. Davis-King	2002	Greer Road Bridge Retrofit Archaeological Survey
ST-04701	R. Cartier	2002	Cultural Resource Evaluation of the Hatch Road Regional Park Project in the County of Stanislaus
ST-05862	S. Davis-King	2005	Negative Archaeological Survey Report, Left-Turn Pockets on Hatch Road at Four Intersections: Faith Home, Gilbert, Parks, and Clinton Roads
ST-06446	M. A. Peak	2006	Cultural Resources Assessment for the Turlock Irrigation Districts Regional Water Supply Project County of Stanislaus, California

CCIC No.	Author(s)	Year	Title
ST-07671	C. Broodshear	2012	Historic Properties Survey Report for the Proposed Geer Road Bridge Seismic Retrofit Project, Geer Road at Tuolumne River, Near City of Hughson, Stanislaus Co., CA; Historical Resources Survey Report (JRP) and Archaeological Survey Report
ST-08284	AECOM	2011	Cultural Resources Inventory Report for the Central Valley Independent Network Fiber Optic Communications Network Project, California

Cultural resources that have been previously recorded within the project study area include three linear resources that cross over the pipeline route; these are the Ceres Main Canal; the Upper Lateral No. 2, Upper Lateral No. 2-½, and Upper Lateral No. 3, components of the TID Water Conveyance System (P-50-0073; CA-STA-426H); and the Atchison Topeka Santa Fe Railroad (ATSF)(P-50-2006; CA-STA-424H), which is also known as the San Francisco San Joaquin Valley Railroad and the Burlington Northern Santa Fe Railroad. The proposed route for the Turlock finished water transmission main crosses under the Ceres Main Canal at Euclid Avenue, Faith Home Road, and Aldrich Road; Upper Lateral No. 2 at East Service Road; Upper Lateral No. 2-½ at Berkeley Road; and Upper Lateral No. 3 at Quincy Road. The proposed Turlock finished water transmission main crosses under the ATSF north of Alderson Road, and the proposed Ceres finished water transmission main crosses under the ATSF on Hatch Road.

Sections of the TID system that are crossed by the proposed project pipeline route have not yet been recorded, although nearby and adjacent sections have been recorded. The site record for the TID system is not detailed (Daly 2009a) but it states that, while the TID system appears eligible for the NRHP and CRHR as being the first publicly owned irrigation system in California, the various canals do not appear to be individually eligible due to loss of integrity over decades of modifications, such that they no longer resemble the original dirt conveyances. The Historic Property Data File for Stanislaus County, compiled by the Office of Historic Preservation, lists the Ceres Main Canal at Hatch Road with a rating of 6Y, not eligible for listing in the NRHP.

There are two site records for the ATSF, both of which record segments of the railroad not included the project study area; one recorded section is near Riverbank (Carey & Co. 2007) while the second is near Hughson (Daly 2009b). The Carey & Co. (2007) site record reports that the railroad line does not appear eligible for listing on the NRHP and CRHR. The Daly (2009b) site record, however, indicates that, while the ATSF line appears NRHP/CRHR eligible, individual segments are not eligible due to lack of integrity from continual upgrades such as replacement of rails, ties, ballast bed, crossing guards and other related equipment.

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4 Inventory Methods and Results

4.1 Pedestrian Survey

A field review of the project study area was conducted by Horizon archaeologists on June 14 and 16, 2017. The survey area included both sides of roads where new pipelines would be constructed, which was surveyed for a distance of 5 feet from the edge of pavement; a 25-foot-wide corridor in locations where the pipeline route would not follow a roadway; all staging and boring locations; and the locations of the Ceres and Turlock terminal facilities. Any exposures of the subsurface were more closely inspected and trowel exposures were also applied to the surface in areas that were heavily vegetated or grassy. The 48-acre WTP parcel was not surveyed at this time, as the exact location of the plant, which will occupy only a portion of the property, has not been determined. Infrastructure features, such as the TID canals and the ATSF, were not recorded as part of this study because the pipelines at these locations would be constructed by boring under the features, which would not be disturbed. Ground surface visibility was good to fair throughout the project area, which consisted primarily of orchards and agricultural fields. No cultural resources were identified.

The following describes the two sections of alignments in terms of the survey results.

Ceres Finished Water Transmission Main

The 5-mile length of this section of the proposed pipeline runs along E. Hatch Road, east of Ceres, which features the existing Ceres Canal on the south side of the road. The north side of the road is mostly orchard and dirt shoulder (see Photo 1). Two other alternatives along this alignment were also surveyed as part of this overall alignment: the Ceres Finished Water Main Alternative H and Alternative A, as shown in Figure 2 and 3. Alternative A follows along the north side of the Ceres Canal between Aldrich Road and Greer Road. Throughout the length of the proposed alignments, the shoulders have been modified from the orchard activities, road construction, electrical substation activities, and the canal. The alignment crosses the ATSF (construction was occurring at the Hatch Road/ ATSF). The surface soils are silty sand. No evidence of cultural resources was identified along this segment.



**Photo 1: Ceres Finished Water Transmission Main Alignment,
View West on North side of Hatch Avenue**

Turlock Treated Water Transmission Main

This 7-mile segment consists of a similar landscape to the Ceres alignment discussed above; however, this segment runs south from the existing canal at roughly the location of the proposed treatment facility and traverses mostly orchard properties on either side of the road (Photo 2 depicts a typical view at Berkeley Road and Service Road).



**Photo 2: Turlock Treated Water Transmission Main Alignment,
View North along Berkeley Road at Service Drive**

Both sides of the road were surveyed and, as mentioned, the conditions were similar to the Ceres alignment: road and orchard disturbance throughout; very sandy, silty soils. Visibility was very good along this alignment, but given the level of disturbance, the expectation was that only an isolated cultural resource was likely. Irrigation pipelines and large valves used to flood the orchards were frequently seen on the edge of the road. The alignment terminates in an agricultural field.

4.2 Geomorphic Assessment

To assess the potential for buried archaeological sites within the proposed project components, this assessment takes into account factors that either encouraged or discouraged human use or occupation of certain landforms (e.g., geomorphic setting and distance to water), combined with those that affected the subsequent preservation (i.e., erosion or burial) of those landforms. It is well known, for instance, that prehistoric archaeological sites in California are most often found on relatively level landforms near natural water sources (e.g., spring, stream, river, or estuary), which is often where two or more environmental zones (ecotones) are present. Landforms with this combination of variables are frequently found at or near the contact between a floodplain and a higher and older geomorphic surface, such as an alluvial fan or stream terrace (Waters 1992).

In general, most Pleistocene-age landforms have little potential for harboring buried archaeological resources, as they developed before the first evidence of human migration into North America (ca. 13,000 years before the present). However, Pleistocene surfaces buried below younger Holocene deposits do have a potential for containing archaeological deposits. Holocene alluvial deposits may contain buried soils (paleosols) that represent periods of landform stability before renewed deposition. The identification of paleosols within Holocene-age landforms is of particular interest

because they represent formerly stable surfaces that have a potential for preserving archaeological deposits.

Given the above criteria it is therefore possible to forecast the sensitivity for buried archaeological remains by looking at the intersection of existing geomorphic, stratigraphic, and soils spatial variables, as well as any behavioral variables that may forecast human occupation. Consequently, the following describes the project area in terms of these variables and generates a forecast on the basis of the intersection between these variables. In addition, the current site conditions and the levels of previous disturbance are taken into account to determine the likelihood of encountering intact buried deposits given the expected depths of proposed excavation. This is not an analysis of whether a particular area was attractive for human activity, but whether the conditions are favorable for buried archaeological deposits.

Geomorphology and Soils

As previously mentioned, the project area is located in the Great Central Valley geomorphic province, which is comprised chiefly of non-marine sediments covered by alluvial materials. The geology of the region is reportedly a mix of Pleistocene alluvial deposits, derived from erosion of the Sierra Nevada Mountains. These alluvial deposits are covered by silt, sand, clay, gravel, and channel deposits of the Tuolumne River drainage area and were deposited during the Quaternary period (Norris and Webb 1990).

A review of the Soil Survey Geographic Database for this section of Stanislaus County revealed that the project area consists primarily of Hanford sandy loam, which occupies 0 to 2 percent slopes and exhibits a restrictive layer at greater than 80 inches in depth. It is associated with terraces and toe-slope formations from alluvial and fluvial deposition.

This soil profile, and similar adjacent examples, belong to comparable soil series that are derived primarily from alluvial and fluvial deposition from the Sierra Nevada range and deposited in seasonal events from the nearby Tuolumne River.

Buried Deposit Forecast

In order to assess the potential for the project actions to disturb buried archaeological deposits, a review was conducted of the comprehensive geoarchaeological study for Caltrans District 10 prepared by Rosenthal et al. (2004). The following analysis is derived from the results of this study.

Stanislaus County is predominately underlain by younger Holocene alluvial deposits. Although the depositional environment is conducive to site burial, the frequency of high-energy floods in the past would have been more likely to violently disturb sites than preserve them. This is especially true in the project area as it is close to the Tuolumne River and has roughly a 0 to 2 percent slope, which increases the likelihood of it bearing the brunt of flood- and levy related events. Therefore, the flat terrain of the project area is not consistent with other known sites for the ethnographic Yokuts, which usually rest on a knoll or elevated ridge when in close proximity to the river.

The younger, upper soils have also been heavily impacted by the nearly century-long use of the project area for agricultural and orchard management purposes, likely to a depth of up to at least 3 feet. This is commonly known as “the plow zone.” The repeated churning of the plow zone and the

vibration of more modern machinery causes a great deal of artifact migration and destruction, significantly impacting the likelihood of intact resources.

Additionally, the project area is now located within a highly suburbanized, hardscape setting, and very little, if any, native surface is visible within the project area. Further, given the relatively narrow horizontal level of disturbance for the proposed pipeline alignments, the probability of encountering intact buried deposits during construction is considered low.

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5 Summary and Recommendations

The SRWA is preparing documentation in order to evaluate potential environmental effects of the proposed Surface Water Supply Project in accordance with CEQA and federal regulations. This document discusses the results of efforts to identify and evaluate archaeological resources within the area representing the study area for the Turlock and Ceres Finished Water Mains elements of the proposed project. Archival research and pedestrian surveys identified no archaeological resources within the study area.

Given the rate of landscape change in the San Joaquin Valley and the proximity of the proposed alignments and proposed facilities to areas of urban, railroad, and agricultural/orchard activities, the existence of substantial and intact surface manifestations of cultural activity is not expected. In addition, and as discussed in Section 1.2, the majority of the excavation for pipeline and treatment facilities will be conducted in areas that have experienced grading and excavation from roadway construction and orchard development. As a result, a majority of the proposed construction will be conducted in previously disturbed zones, which reduces the potential for intact buried deposits. However, the potential to encounter archaeological deposits—especially deeply buried deposits—exist throughout the APE; therefore, mitigations, such as, but not limited to, the following, should be implemented as planning proceeds.

In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and after notification, the Project Proponent shall consult with a qualified archaeologist to assess the significance of the find. If any find is determined to be significant (CEQA Guidelines 15064.5[a][3] or as unique archaeological resources per Section 21083.2 of the California Public Resources Code), representatives of the SRWA and a qualified archaeologist shall meet to determine the appropriate course of action. In considering any suggested mitigation proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the lead agency shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is carried out.

The possibility of encountering human remains cannot be discounted. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered, work should halt in the vicinity of the remains and, as required by law, the Alameda County coroner should be notified immediately. An archaeologist should also be contacted to evaluate the find. If human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of that determination. Pursuant to California Public Resources Code Section 5097.98, the NAHC, in turn, will immediately contact an individual who is most likely descended from the remains (the “Most Likely Descendant”). The Most Likely Descendant has 48 hours to inspect the site and recommend treatment of the remains. The landowner is obligated to work with the Most Likely Descendant in good faith to find a respectful resolution to the situation and entertain all reasonable options regarding the Most Likely Descendant’s preferences for treatment.

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6 References

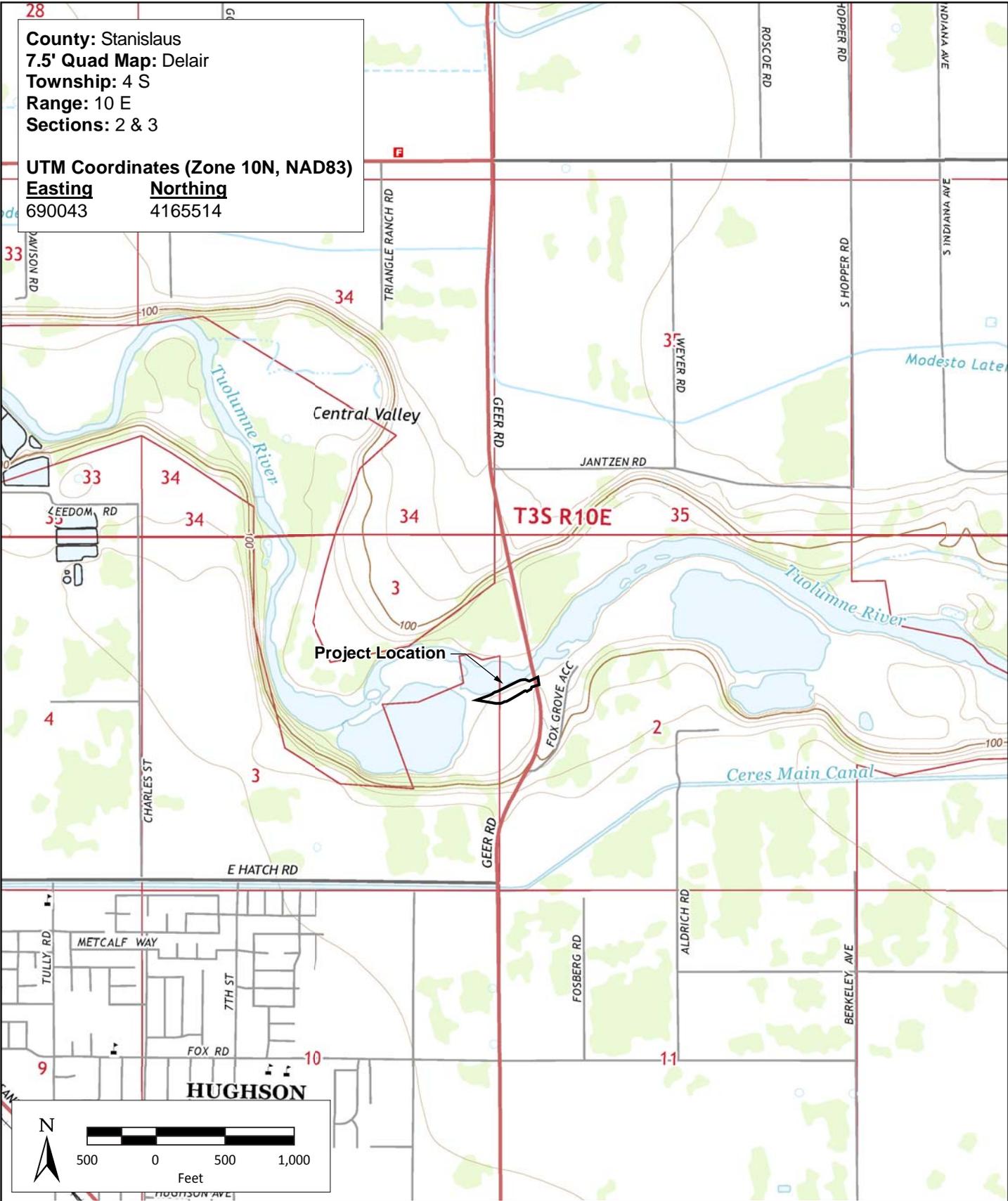
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Appendix A

Native American Correspondence

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Map Source: USGS Waterford and Delair Quads 2015

Figure #-#
Project Location Map

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX



January 30, 2017

Michael Brinton, Deputy Director of Public Works
Stanislaus Regional Water Authority/ City of Ceres

Sent by E-mail: Michael.brinton@ci.ceres.ca.us

RE: Proposed Stanislaus Regional Water Authority Surface Water Treatment Project, City of Ceres; Ceres and Denair USGS Quadrangles, Stanislaus County, California

Dear Mr. Brinton:

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 of the reference codes below is to avoid or mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects under AB-52.

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 measures.

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 public 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 project 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 will 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: gayle.totton@nahc.ca.gov.

Sincerely,



Gayle Totton, M.A., PhD.

Associate Governmental Program Analyst

**Native American Heritage Commission
Tribal Consultation List
Stanislaus County
1/30/2017**

North Valley Yokuts Tribe

Katherine Erolinda Perez,
Chairperson
P.O. Box 717
Linden, CA, 95236
Phone: (209)887-3415
canutes@verizon.net

Costanoan
Northern Valley
Yokut

Southern Sierra Miwuk Nation

Lois Martin, Chairperson
P.O. Box 186
Mariposa, CA, 95338
Phone: (209)742-6867

Miwok
Northern Valley
Yokut
Paiute

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 6097.98 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Stanislaus Regional Water Authority Surface Water Treatment Project, Stanislaus County.



STANISLAUS REGIONAL WATER AUTHORITY

156 S. Broadway, Ste. 270, Turlock, CA 95380
(209) 668-5490 (phone) (209) 668-5695 (fax)

February 14, 2017

Lois Martin, Chairperson
Southern Sierra Miwuk Nation
P.O. Box 186
Mariposa, CA 95338

**SUBJECT: Stanislaus Regional Water Authority Surface Water Treatment Project
Tribal Cultural Resources Consultation**

Dear Chairperson Martin:

The Stanislaus Regional Water Authority (SRWA) is a Joint Powers Authority comprised of the Cities of Ceres and Turlock (Cities) and is responsible for the planning, procurement, and operation of new surface water supply facilities to serve municipal and industrial customers within the Cities' respective service areas. SRWA is proposing to construct a new water treatment plant and associated facilities to provide additional water supply to each of the Cities (**Figure 1**). The proposed project would involve construction and operation of the following facilities:

- a raw water pump station to draw water from an existing infiltration gallery (see further description below) adjacent to the Tuolumne River, west of the Geer Road Bridge;
- raw water transmission pipelines to convey the water to a water treatment plant;
- a water treatment plant east of Fox Grove Regional Park that would treat the raw water to drinking water standards;
- treated water transmission mains to transport water from the water treatment plant to the Turlock Irrigation District (TID) Main Canal and to terminal storage facilities in Turlock and Ceres; and
- storage and distribution facilities at each of the terminal sites.

In 2002, TID constructed an infiltration gallery west of the Geer Road Bridge with the intent of constructing a raw water pump station and drawing water from the river for agricultural use, when needed. To date, that infiltration gallery has not been tested or operated. As part of the proposed Surface Water Treatment Project, SRWA proposes to construct a wet well and sedimentation basin adjacent to the infiltration gallery (**Figure 2**) and conduct development pumping and water quality testing. Testing results would provide information about the operational capacity of the infiltration gallery and the types of treatment that might be required at the water treatment plant.

Archaeological surveys were conducted at the infiltration gallery area in 2000 and the proposed water treatment plant location in 2006. No archaeological resources were

identified in these project areas during either study. The routes for the water transmission mains will be surveyed as the environmental studies for the project proceed.

In accordance with Public Resources Code Section 21080.3.1 et seq., SWRA is notifying you of our intent to consider the proposed project. If you wish to initiate formal consultation with SWRA regarding any potential impacts of this project on tribal cultural resources, Public Resources Code Section 21080.3.1(e) requires that you contact SRWA within 30 days from your receipt of this letter. If you wish to request consultation, or if you have any questions, please contact:

Michael F. Brinton, Interim General Manager
Stanislaus Regional Water Authority
c/o City of Turlock Municipal Services
156 S. Broadway, Suite 230
Turlock, CA 95380
Email: Michael.Brinton@ci.ceres.ca.us

If you do not contact SRWA within 30 days following receipt of this letter, SWRA will proceed with environmental review for the above-referenced project with the assumption that the project would not have a potential effect on tribal cultural resources. If consultation is requested, please provide the name and contact information of the designated lead contact person as part of your request. SWRA will contact the designated person to set a meeting date to begin consultation within 30 days of our receipt of your request.

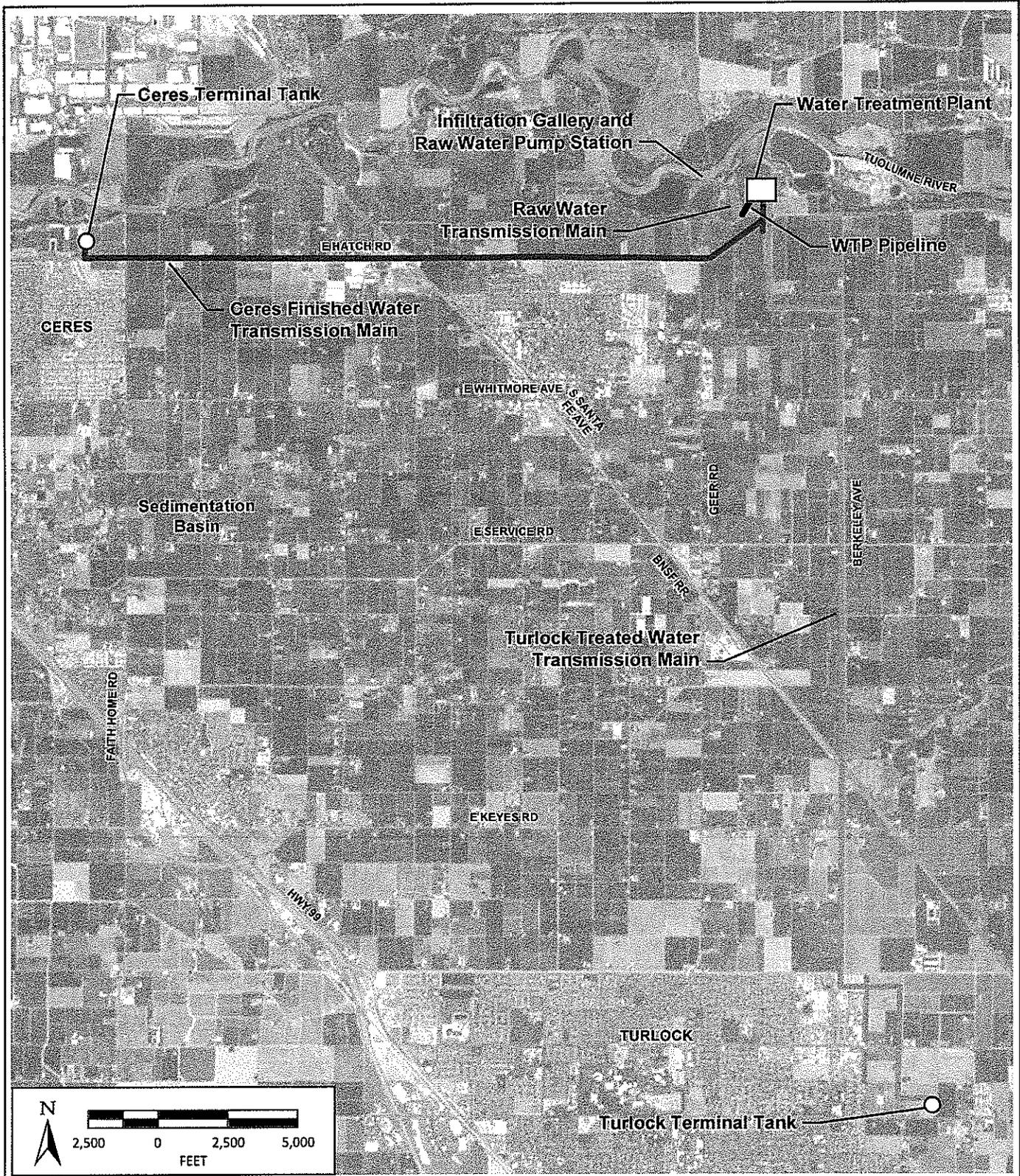
More detailed information about this proposed project is available at your request. Thank you for giving this matter your prompt attention.

Sincerely,



Michael F. Brinton, Interim General Manager
Stanislaus Regional Water Authority

Enclosures: Figure 1. Project Overview
Figure 2. Proposed Project Facilities – Infiltration Gallery Development and Testing



Source: West Yost 2016

Legend

-  Raw Water Transmission Main
-  Turlock Treated Water Transmission Main
-  Ceres Treated Water Transmission Main
-  WTP Pipeline

**Figure 1.
Project Overview**

Prepared by:



Surface Water Supply Project



Aerial Image: © 2016 Google

Figure 2.
Proposed Project Facilities

Prepared by:
Horizon
WATER CONSULTING

Infiltration Gallery
Development and Testing



STANISLAUS REGIONAL WATER AUTHORITY

156 S. Broadway, Ste. 270, Turlock, CA 95380
(209) 668-5490 (phone) (209) 668-5695 (fax)

February 14, 2017

Michael Mirelez
Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

**SUBJECT: Stanislaus Regional Water Authority Surface Water Treatment Project
Tribal Cultural Resources Consultation**

Dear Mr. Mirelez:

The Stanislaus Regional Water Authority (SRWA) is a Joint Powers Authority comprised of the Cities of Ceres and Turlock (Cities) and serves as the lead agency for preparation of environmental review documents under the California Environmental Quality Act (CEQA).

The SRWA received a letter from the Torres Martinez Desert Cahuilla Indians requesting formal notification of all proposed projects within the SRWA's jurisdiction that could impact geographic areas traditionally and culturally affiliated with the Torres Martinez Desert Cahuilla Indians.

According to the records before the SRWA, there is no evidence to indicate that the Torres Martinez Desert Cahuilla Indians are traditionally and culturally affiliated with any geographic area within the SRWA's jurisdiction.

Pursuant to Public Resources Code Section 21080.3.1 *et seq.*, the SRWA is only required to formally notify and consult with California tribes traditionally and culturally affiliated with geographic areas of proposed projects within the SRWA's jurisdiction. For this reason, the SRWA respectfully requests that you provide all evidence indicating the geographic areas within the SRWA's jurisdiction that are traditionally and culturally affiliated with the Torres Martinez Desert Cahuilla Indians.

Please contact:

Michael F. Brinton, Interim General Manager
Stanislaus Regional Water Authority
c/o City of Turlock Municipal Services
156 S. Broadway, Suite 230
Turlock, CA 95380
Email: Michael.Brinton@ci.ceres.ca.us

If you do not contact the SRWA within 30 days following receipt of this letter, we will consider the above referenced letter moot on the assumption that all geographic areas within the SRWA's jurisdiction are not traditionally and culturally affiliated with the Torres Martinez Desert Cahuilla Indians.

Sincerely,



Michael F. Brinton, Interim General Manager
Stanislaus Regional Water Authority

Enclosures: Figure 1. Project Overview
 Figure 2. Proposed Project Facilities – Infiltration Gallery Development and Testing



Aerial Image: © 2016 Google

Figure 2.
Proposed Project Facilities



STANISLAUS REGIONAL WATER AUTHORITY

156 S. Broadway, Ste. 270, Turlock, CA 95380
(209) 668-5490 (phone) (209) 668-5695 (fax)

February 14, 2017

Katherine Erolinda Perez, Chairperson
P.O. Box 717
Linden, CA 95236

**SUBJECT: Stanislaus Regional Water Authority Surface Water Treatment Project
Tribal Cultural Resources Consultation**

Dear Chairperson Perez:

The Stanislaus Regional Water Authority (SRWA) is a Joint Powers Authority comprised of the Cities of Ceres and Turlock (Cities) and is responsible for the planning, procurement, and operation of new surface water supply facilities to serve municipal and industrial customers within the Cities' respective service areas. SRWA is proposing to construct a new water treatment plant and associated facilities to provide additional water supply to each of the Cities (**Figure 1**). The proposed project would involve construction and operation of the following facilities:

- a raw water pump station to draw water from an existing infiltration gallery (see further description below) adjacent to the Tuolumne River, west of the Geer Road Bridge;
- raw water transmission pipelines to convey the water to a water treatment plant;
- a water treatment plant east of Fox Grove Regional Park that would treat the raw water to drinking water standards;
- treated water transmission mains to transport water from the water treatment plant to the Turlock Irrigation District (TID) Main Canal and to terminal storage facilities in Turlock and Ceres; and
- storage and distribution facilities at each of the terminal sites.

In 2002, TID constructed an infiltration gallery west of the Geer Road Bridge with the intent of constructing a raw water pump station and drawing water from the river for agricultural use, when needed. To date, that infiltration gallery has not been tested or operated. As part of the proposed Surface Water Treatment Project, SRWA proposes to construct a wet well and sedimentation basin adjacent to the infiltration gallery (**Figure 2**) and conduct development pumping and water quality testing. Testing results would provide information about the operational capacity of the infiltration gallery and the types of treatment that might be required at the water treatment plant.

Archaeological surveys were conducted at the infiltration gallery area in 2000 and the proposed water treatment plant location in 2006. No archaeological resources were identified in these project areas during either study. The routes for the water transmission mains will be surveyed as the environmental studies for the project proceed.

In accordance with Public Resources Code Section 21080.3.1 et seq., SWRA is notifying you of our intent to consider the proposed project. If you wish to initiate formal consultation with SWRA regarding any potential impacts of this project on tribal cultural resources, Public Resources Code Section 21080.3.1(e) requires that you contact SRWA within 30 days from your receipt of this letter. If you wish to request consultation, or if you have any questions, please contact:

Michael F. Brinton, Interim General Manager
Stanislaus Regional Water Authority
c/o City of Turlock Municipal Services
156 S. Broadway, Suite 230
Turlock, CA 95380
Email: Michael.Brinton@ci.ceres.ca.us

If you do not contact SRWA within 30 days following receipt of this letter, SWRA will proceed with environmental review for the above-referenced project with the assumption that the project would not have a potential effect on tribal cultural resources. If consultation is requested, please provide the name and contact information of the designated lead contact person as part of your request. SWRA will contact the designated person to set a meeting date to begin consultation within 30 days of our receipt of your request.

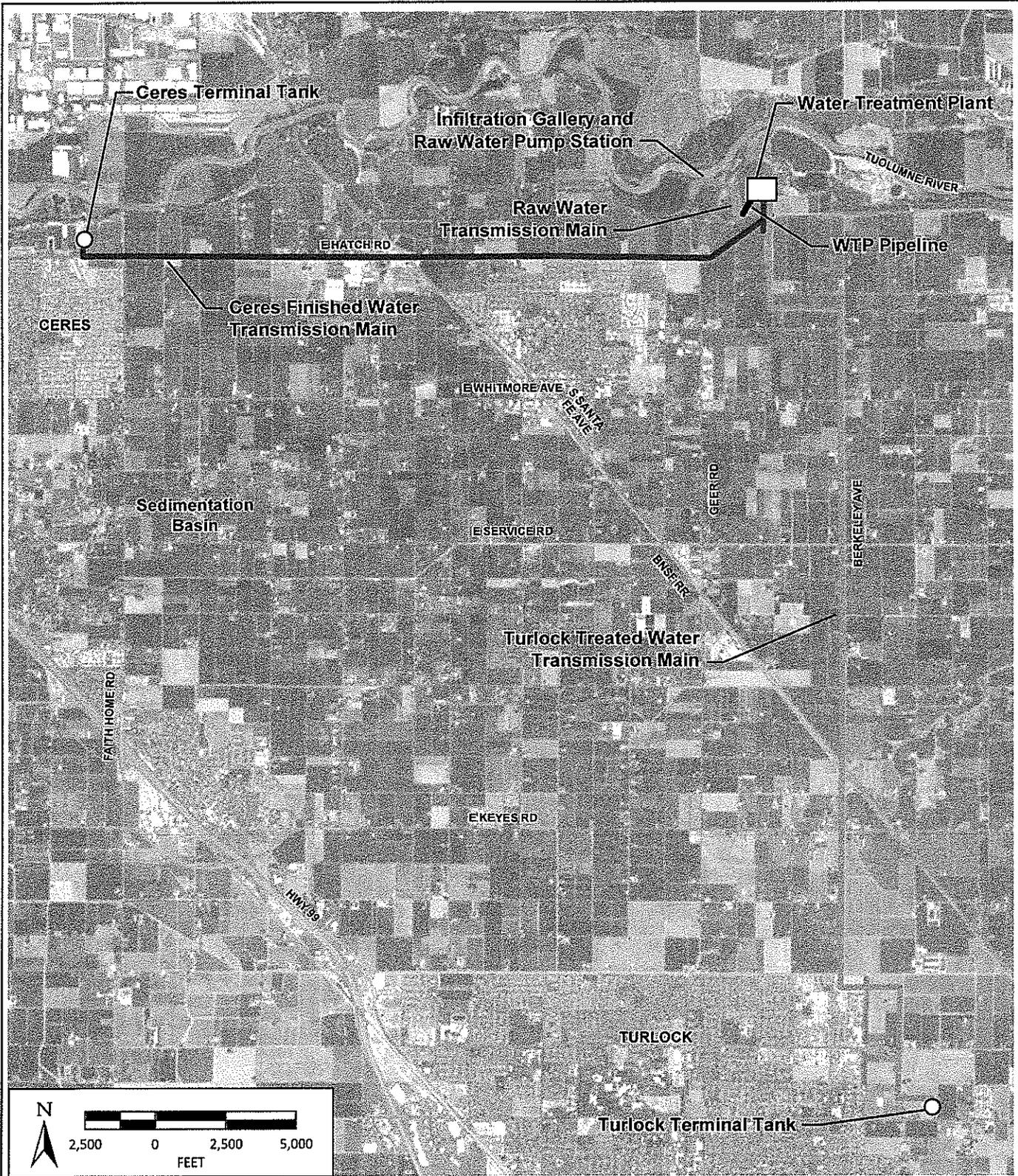
More detailed information about this proposed project is available at your request. Thank you for giving this matter your prompt attention.

Sincerely,



Michael F. Brinton, Interim General Manager
Stanislaus Regional Water Authority

Enclosures: Figure 1. Project Overview
Figure 2. Proposed Project Facilities – Infiltration Gallery Development and Testing



Source: West Yost 2016

Legend

-  Raw Water Transmission Main
-  Turlock Treated Water Transmission Main
-  Ceres Treated Water Transmission Main
-  WTP Pipeline

**Figure 1.
Project Overview**

Prepared by:


Surface Water Supply Project

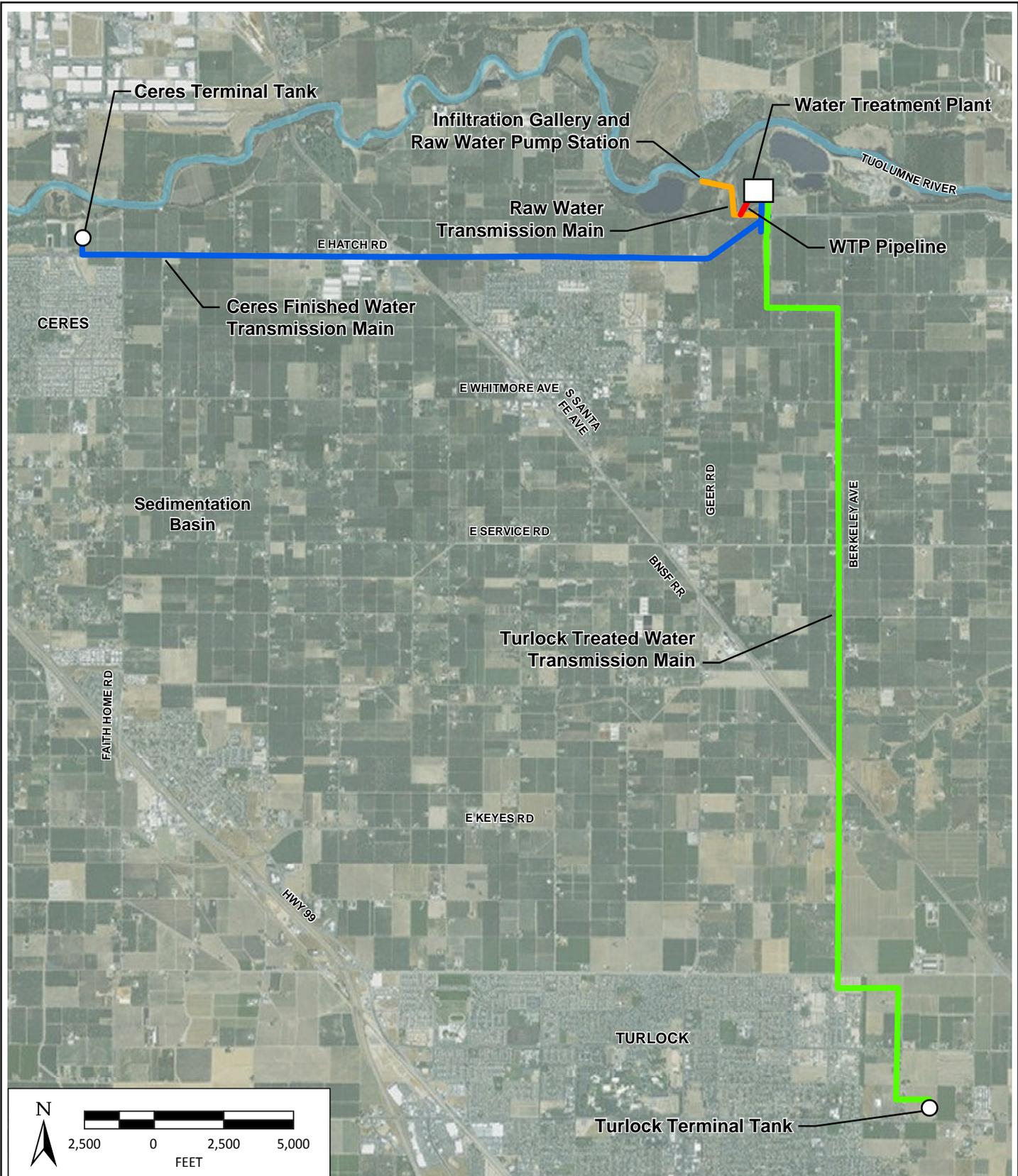


Aerial Image: © 2016 Google

Figure 2.
Proposed Project Facilities

Prepared by:
Horizon
WATER CONSULTANTS

**Infiltration Gallery
 Development and Testing**



Source: West Yost 2016

Legend

- Raw Water Transmission Main
- Turlock Treated Water Transmission Main
- Ceres Treated Water Transmission Main
- WTP Pipeline

**Figure 1.
Project Overview**



- - - Project Boundary
 ●●●●● Potential Access Routes

N
 125 0 125 250
 Feet

Aerial Image: © 2016 Google

Figure 2.
Proposed Project Facilities
Infiltration Gallery
Development and Testing

Appendix B
CHRIS Central California Information Center Results

CONFIDENTIAL – NOT FOR PUBLIC REVIEW

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Appendix D

Noise Calculations

Noise Calculations for the SRWA Project

Construction Equipment 1 (paver)	89	dBA at 50 feet
Construction Equipment 2 (loaded truck)	88	dBA at 50 feet

Combined Noise at 50 feet (Ltotal at 50 feet) 91.5 dBA
 $L_{total} = 10 \log(10^{L1/10} + 10^{L2/10})$

Distance (feet) from Project Site to Sensitive Receptors	Noise level dBA	Noise Level Equation: $Leq = EL50 - 20 * \log(D/50)$
20	99.5	
40	93.5	Residences along Turlock pipeline
50	91.5	
60	90.0	Residences along Ceres Pipeline
80	87.5	
100	85.5	WTP edge to wildlife care center/regional park
140	82.6	WTP edge to nearest residence
165	81.2	Residences near Offset Water Facilities
500	71.5	Residences near Turlock Tank
520	71.2	Fox Grove Regional Park to Infiltration Gallery/RWP Station
550	70.7	Residences near Ceres Tank
1000	65.5	
1200	63.9	Residence near Infiltration Gallery/RWP Station

Name	dBA at 50'	PPV at 25	Lv at 25	Alt-Name/Type
Loader	85			
Excavator	85			
Dumptruck	84			
Dozer	85			
Crane	83			mobile crane
Scraper	89			
Generator (diesel)	81			
Pickup trucks	75			
Pump	76			
Paver	89			
Microtunneling machine	82			Horizontal Boring Hydraulic Jack
Trucks (Loaded)	88	0.076	86	loaded trucks
Grader	85			
Concrete truck	85			concrete mixer
Compactor	82			plate compactor

Values from FHWA 2017 or FTA 2006

Appendix E
Mitigation Monitoring and Reporting Plan

Appendix E

MITIGATION MONITORING AND REPORTING PLAN

This mitigation monitoring and reporting plan (MMRP) identifies the mitigation measures identified in the Stanislaus Regional Water Authority's (SRWA's) Surface Water Supply Project Draft Environmental Impact Report (DEIR). For each mitigation measure, the MMRP identifies monitoring and reporting actions that shall be carried out and the applicable schedule for monitoring activities. This MMRP also includes a column where responsible parties can check off monitoring and reporting actions as they are completed.

As lead agency, SRWA (for activities involving the infiltration gallery, water treatment plant, and transmission pipelines) and the Cities of Ceres and Turlock (for activities involving their respective terminal tank facilities) will be responsible for ensuring that mitigation measures identified in this EIR are fully implemented. Some mitigation measures would be implemented by the contractor(s) on behalf of SRWA and the Cities. Contract documents for the proposed project will identify the obligations of the contractor, including relevant mitigation measures. SRWA and the Cities will require that the contractor(s) provide them with documentation that the contractor has adequately implemented all contractual obligations, including applicable mitigation measures.

Thus, in the descriptions of the mitigation measures provided in below, while SRWA and the Cities may be specifically referenced in implementing a mitigation measure (i.e., where the measure states "SRWA and the Cities shall"), this is intended to be inclusive of the contractor's role in implementing certain mitigation measures during construction or as part of design.

Acronyms and Abbreviations

ANSI	American National Standards Institute
APE	area of potential effect
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
Cities	the City of Turlock and the City of Ceres
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO ₂ e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
CVFPB	Central Valley Flood Protection Board
dB	decibel
dBA	A-weighted decibel
DEIR	draft environmental impact report
FEMA	Federal Emergency Management Agency

GHG	greenhouse gas
GPS	global positioning system
HAZCOM	Hazardous Materials Communication
HMWMP	Hazardous Materials and Waste Management Plan
hp	horsepower
MLD	Most Likely Descendent
MMRP	mitigation monitoring and reporting plan
MT	million tons
NAHC	Native American Heritage Commission
NMFS	National Marine Fisheries Service
NO _x	oxides of nitrogen
NRHP	National Register of Historic Places
OSHA	Occupational Safety and Health Administration
Pub. Res. Code	Public Resources Code
SJVAPCD	San Joaquin Valley Air Pollution Control District
SRWA	Stanislaus Regional Water Authority
TSS	total suspended solids
USFWS	U.S. Fish and Wildlife Service
VELB	valley elderberry longhorn beetle
VOC	volatile organic compound
WPT	western pond turtle
WTP	water treatment plant

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1 **Table E-1.** Mitigation Measures and Implementation Requirements

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<i>Aesthetics</i>			
<p>Mitigation Measure AES-1: Implement Maintenance Practices for Construction Staging Areas and Construction Sites.</p> <p>SRWA and the Cities shall require that the contractor(s) keep construction work areas clean and neat by storing construction materials and equipment at proposed construction staging areas or in areas that are generally shielded from public view (to the extent feasible), and by removing construction debris promptly and at regular intervals.</p>	<ol style="list-style-type: none"> 1. Include maintenance requirements in construction documents 2. Inspect construction sites on a regular basis for compliance 	<ol style="list-style-type: none"> 1. During construction 2. During construction 	
<p>Mitigation Measure AES-2: Use Design Elements to Provide Visual Screening of Wells, Storage Tanks, Pump Stations, and Other Facilities.</p> <p>SRWA and the Cities shall require that the contractor(s) use design elements to provide visual screening of proposed facilities and to integrate them with the existing visual setting. Such design elements may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ Paint proposed storage tank facilities and water treatment plant or include appropriate concrete admixtures to achieve low-glare, earth-tone colors that blend with the surrounding terrain and visual setting. ▪ Wherever feasible, avoid the use of unpainted metallic surfaces and other reflective sources that may cause increased levels of reflectivity. ▪ Wherever feasible, install native landscaping and/or fencing to provide screening for views of the pump station, water storage tanks, and wells from public roads and adjacent residences. ▪ Use downward-facing, shielded lighting fixtures to avoid spillover light from affecting adjacent properties. 	<ol style="list-style-type: none"> 1. Include screening design requirements in design contract 2. Review design to ensure compliance with requirements 3. Include screening requirements in construction documents 	<ol style="list-style-type: none"> 1. During final design 2. During final design 3. During construction 	
<p>Mitigation Measure AES-3: Develop and Implement a Landscape Plan for the Water Treatment Plant.</p> <p>SRWA or its contractor(s) shall develop a landscaping plan that provides adequate screening along the perimeter of the water treatment plant</p>	<ol style="list-style-type: none"> 1. Include landscaping plan design requirements in design contract 	<ol style="list-style-type: none"> 1. During final design 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>(WTP) site in effort to screen views and improve the overall aesthetics of the site. The landscaping plan shall be developed and implemented as part of the construction contract to provide immediate screening of the WTP for sensitive viewers. To the extent feasible, SRWA shall retain (during construction) or plant (following completion of construction) mature trees around the perimeter of the WTP site to buffer views from adjacent residences and Fox Grove Regional Park. Due to the height of the WTP facilities, landscape berms may also be appropriate to screen views from nearby receptors. Landscaping shall rely mostly on native trees, shrubs, and grassland vegetation to minimize water consumption. SRWA shall monitor landscape plantings annually for at least 5 years after project completion to ensure that sufficient ground coverage has developed, and will implement additional measures, such as replanting or modifying irrigation systems, as determined necessary.</p>	<ol style="list-style-type: none"> 2. Review design to ensure compliance with requirements 3. Include landscaping requirements in construction documents 4. Monitor survival of landscaping for at least 5 years after project completion 	<ol style="list-style-type: none"> 2. During final design 3. During construction 4. Annually following completion of construction 	
<p>Mitigation Measure AES-4: Use Shielded Lighting if Nighttime Construction Is Necessary.</p> <p>If nighttime construction is performed, SRWA and the Cities shall require the contractor(s) to use lighting that is shielded and oriented downward to minimize effects on any nearby receptors. Lighting shall be directed toward active construction areas only, and shall have the minimum brightness necessary to ensure worker safety</p>	<ol style="list-style-type: none"> 1. Include lighting requirements in construction documents 2. Inspect construction sites on a regular basis for compliance 	<ol style="list-style-type: none"> 1. During construction 2. During construction 	
Agriculture and Forestry Resources			
<p>Mitigation Measure AG-1: Stockpile Soils and Other Excavated Earth Material During Construction.</p> <p>SRWA or its contractor(s) shall implement the following measures. Topsoil and other earth material removed from Prime Farmland during construction of the WTP and Turlock terminal tank site shall be stockpiled for later reuse after excavation. Soil shall be stored in a designated area for the entirety of these areas' construction. The stockpiles shall be located in an area where construction activities would not affect agricultural or biological resources. All stockpiled soil shall be covered with tarps at all times to prevent the generation of</p>	<ol style="list-style-type: none"> 1. Include soil stockpiling and reuse requirements in construction documents 2. Inspect construction sites on a regular basis for compliance 	<ol style="list-style-type: none"> 1. During construction 2. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>fugitive dust. Excavated soil will then be backfilled at the sites and restored to an appropriate level of compaction following construction.</p>			
<p>Mitigation Measure AG-2: Replant Undeveloped Areas of Prime Farmland following Construction Where Feasible. SRWA and the Cities shall implement the following measure. Where feasible, following construction in areas of Prime Farmland, SRWA shall distribute stockpiled topsoil and replant agricultural products that are determined to be compatible with the operational and maintenance requirements of the adjacent proposed project facilities.</p>	<ol style="list-style-type: none"> 1. Identify areas feasible for replanting in agricultural production. 2. Replant these areas using stockpiled soils (see MM AG-1). 	<ol style="list-style-type: none"> 1. During final project design 2. Following construction 	
Air Quality			
<p>Mitigation Measure AQ-1: Prepare Quantitative Analysis of Construction-related Air Quality and Greenhouse Gas Emissions, and Implement Measures to Cap Emissions. As the project design is further defined to a level that construction emissions can be estimated and evaluated, and prior to construction, SRWA and the Cities shall prepare a quantitative analysis of construction-related air quality and greenhouse gas (GHG) emissions for the proposed project. The quantitative construction air quality and GHG analysis shall be based on the types, locations, numbers, and operations of equipment to be used; the amount and distance of material to be transported; and worker trips required. In addition, the analysis shall be based on the projected quantity and frequency of vehicle and truck trips, and other activities that generate emissions. The analysis shall determine whether the combined emissions of the quantified construction activities exceed the San Joaquin Valley Air Pollution Control District’s (SJVAPCD’s) construction-related air quality thresholds (Table 3.3-2) or the 10,000 million tons (MT) of carbon dioxide equivalents (CO₂e) per year threshold for industrial sources. If the analysis determines that construction emissions would exceed the air quality and/or GHG significance thresholds, then SRWA shall identify and implement appropriate mitigation to the extent feasible. As a performance standard, the mitigation measures shall demonstrate that</p>	<ol style="list-style-type: none"> 1. Develop quantitative estimate of construction-related emissions using the identified information 2. If emissions would exceed SJVAPCD construction thresholds, work with SJVAPCD to identify appropriate implement measures that will achieve emissions reductions to the extent feasible 3. Inspect construction sites on a regular basis to ensure compliance 	<ol style="list-style-type: none"> 1. During final project design 2. During final project design 3. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>off-road equipment (greater than 50 horsepower [hp]) and material hauling vehicles used during construction (i.e., owned, leased, and subcontracted vehicles) will achieve emission reductions to the extent feasible. Equipment and material hauling vehicles shall achieve at least a project-wide fleet average of 20 percent oxides of nitrogen (NO_x) reduction and 45 percent DPM reduction compared to the most recent California Air Resources Board (CARB) fleet average up to a Tier IV-equivalent engine. Examples of appropriate mitigation may include, but not be limited to, alternative-fueled equipment, phasing of material hauling trips, phasing of construction activities, use of chemical additives or after-market devices to reduce emissions on existing equipment, use of electrically powered equipment, reduction in total equipment hours, use of newer equipment models, use of alternative fuels, engine retrofit technology, adopting a vehicle idling policy requiring all vehicles to adhere to a 5-minute idling policy, and sourcing of material from local sources. Actual emissions efficiency for off-road equipment and motor vehicles shall be at least as efficient as the most recent CARB fleet average for off-road equipment and motor vehicles for the current calendar year.</p> <p>For GHG emissions, the following measures will be considered and implemented to the extent feasible: implement energy efficiency improvements of pumps through design, construction, and refurbishment methods; investigate and implement opportunities for renewable energy development at the facilities, subject to safety, emergency, and environmental considerations; and implement a construction worker commute strategy to minimize GHG emissions from workers commuting to the site. This may include encouraging use of carpools, vanpools, and public transportation.</p>			
<p>Mitigation Measure AQ-2: Prepare Quantitative Analysis of Operation-related Air Quality and Greenhouse Gas Emissions, and Implement Measures to Cap Emissions.</p> <p>As future project design details are further defined to a level that operational emissions can be estimated and evaluated, and prior to</p>	<ol style="list-style-type: none"> 1. Develop quantitative estimate of operations-related emissions using the identified information 2. If emissions would exceed SJVAPCD operational thresholds, work with SJVAPCD to identify appropriate implement measures 	<ol style="list-style-type: none"> 1. During final project design 2. During final project design 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>construction, SRWA and the Cities shall prepare a quantitative air quality and GHG analysis for the proposed project.</p> <p>The quantitative operational air quality and GHG analysis shall be based on the types, locations, numbers, and operations of equipment to be used; the amount and distance of material to be transported; and worker trips required. In addition, the analysis shall be based on the projected quantity and frequency of vehicle and truck trips and other activities that generate emissions, including estimates of water treatment plant operations of permitted and unpermitted sources including GHG emissions, fugitive emissions of volatile organic compounds (VOCs), and particulate matter. The analysis shall determine whether the quantified emissions of the project’s operational activities exceed the SJVAPCD’s permitted and unpermitted air quality thresholds (see the SJVAPCD thresholds presented in Table 3.3-3) or the 10,000 MT CO₂e per year threshold for industrial sources.</p> <p>If the analysis determines that operational emissions would exceed the air quality or GHG significance thresholds, then SRWA shall identify and implement appropriate mitigation to the extent feasible. As a performance standard, the mitigation measures shall demonstrate that off-road equipment (greater than 50 hp) and material hauling vehicles used during project operation (i.e., owned, leased, and subcontracted vehicles) achieve emission reductions to the extent feasible. Equipment and material hauling vehicles shall achieve at least a project-wide fleet average of 20 percent NO_x reduction, 45 percent DPM reduction, and equal the GHG emissions compared to the most recent CARB fleet average up to a Tier IV-equivalent engine. This can also be achieved by replacing existing equipment with more efficient and lower emitting equipment (e.g., new emergency generators). Examples of appropriate mitigation may include, but not be limited to, alternative fueled equipment, phasing of material hauling trips, use of chemical additives or after-market devices to reduce emissions on existing equipment, use of electrically powered equipment, reduction in total equipment hours, use of newer equipment models, use of alternative fuels, engine retrofit technology, adopting a vehicle idling policy requiring all vehicles to adhere to a 5-minute idling policy, and sourcing of material from local</p>	<p>that will achieve emissions reductions to the extent feasible</p> <p>3. Inspect facilities on a regular basis to ensure compliance</p>	<p>3. Ongoing during facility operations</p>	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>sources. For unpermitted sources in particular, fugitive VOC and particulate matter potential emission reduction options include use of vegetative filtration (i.e., through tree planting) around areas of fugitive emissions, and any other measures deemed appropriate.</p> <p>In addition, for GHG emissions the following measures will be considered and implemented to the extent feasible: implement energy efficiency improvements of pumps through design, construction, and refurbishment methods; investigate and implement opportunities for renewable energy development at the facilities subject to safety, emergency, and environmental considerations; and implement a construction worker commute strategy to minimize GHG emissions from workers commuting to the site. This may include encouraging use of carpools, vanpools, and public transportation.</p>			
Biological Resources			
<p>Mitigation Measure BIO-1: Avoid Impacts on Valley Elderberry Longhorn Beetle (VELB), Where Feasible.</p> <p>To the extent feasible, SRWA and its contractor(s) shall comply with and implement the following avoidance measures (based on the U.S. Fish and Wildlife Service’s [USFWS’] <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> [USFWS 2017]):</p> <ul style="list-style-type: none"> ▪ No less than 15 days prior to commencing construction, document the locations and condition of elderberry plants within 165 feet of construction areas, including photographing the base, stems, and canopy of those shrubs. ▪ Fence and flag all areas to be avoided during construction activities, including the access road corridor and the 20-foot buffer from the dripline of the canopy of all established elderberry shrubs within 165 feet of the access road. ▪ A qualified biologist shall provide training for all contractors, work crews, and any on-site personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance. 	<ol style="list-style-type: none"> 1. Include mitigation requirements in construction documents 2. Retain a qualified biologist. 3. Conduct required surveys; mark avoidance areas with fencing and signage; provide worker training 4. Inspect construction sites weekly 5. Limit trimming; use of herbicides, insecticides, chemicals; and mechanical weed removal 6. Implement erosion controls 7. Revegetate with appropriate native plants 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 5. Before and during construction 6. During construction 7. After construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<ul style="list-style-type: none"> ▪ A qualified biologist will conduct weekly site inspections during the VELB flight season (March-July) to examine elderberry shrub condition. ▪ To the extent feasible, all activities that could occur within 165 feet of an elderberry shrub shall be conducted outside of the flight season of the VELB (March-July). ▪ 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 will be maintained for the duration of construction. ▪ If required, trimming of elderberry shrubs shall occur between November and February and shall avoid the removal of any branches or stems that are 1 inch or greater in diameter. ▪ Herbicides shall not be used within the dripline of an elderberry shrub. Insecticides shall not be used within 100 feet of an elderberry shrub. All chemicals shall be applied using a backpack sprayer or similar direct application method. ▪ Mechanical weed removal within the dripline of elderberry shrubs shall be limited to the season when VELB adults are not active (August-February) and shall avoid damaging the shrubs. ▪ Erosion control shall be implemented and the affected area shall be revegetated with appropriate native plants. 			
<p>Mitigation Measure BIO-2: Implement VELB Compensatory Mitigation, if Necessary.</p> <p>Where VELB shrub avoidance is not feasible, SRWA shall implement the following compensatory mitigation measures (based on USFWS’ <i>Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle</i> [USFWS 2017]):</p>	<ol style="list-style-type: none"> 1. Compensatory Mitigation Proposal shall be developed with and approved by USFWS. 2. Mitigation credits will be purchased by SRWA. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<ul style="list-style-type: none"> ▪ Impacts on VELB habitat shall be mitigated through purchase of compensatory mitigation credits from a USFWS-approved mitigation bank or through on- or off-site mitigation. If on- or off-site mitigation is planned, a Compensatory Mitigation Proposal shall be developed and shall be subject to approval by USFWS. ▪ Mitigation ratios shall be based on impacts on riparian habitat, as well as impacts to individual shrubs. Impacts on riparian habitat shall be mitigated at a ratio of 3 acres of mitigation bank credits or replacement habitat for every 1 acre of elderberry shrubs in riparian habitat that would be disturbed (a 3:1 mitigation ratio). For disturbance to elderberry shrubs in non-riparian habitat, a 1:1 ratio shall be used. ▪ Impacts on individual shrubs in riparian areas may be mitigated by the purchase of 2 credits at a USFWS-approved bank for each shrub affected (a 2:1 ratio), regardless of the presence of exit holes. Impacts on individual shrubs in non-riparian areas shall be replaced at a 1:1 ratio if exit holes have been found in any shrub on or within 165 feet of the project area. 			
<p>Mitigation Measure BIO-3: Where Avoidance Is Not Feasible, Transplant Elderberry Shrubs.</p> <p>Where VELB shrub avoidance is not feasible, SRWA or its contractor(s) shall transplant elderberry shrubs according to the following methodology (based on USFWS’ Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle [USFWS 2017]):</p> <ul style="list-style-type: none"> ▪ If an elderberry shrub cannot be avoided or if indirect effects will result in the death of stems or the entire shrub, then, in addition to implementation of Mitigation Measure BIO-2, the shrub shall be transplanted, if feasible. Any elderberry shrub that would be extremely difficult to move or is unlikely to survive transplanting may not be appropriate for transplanting. ▪ Elderberry shrubs shall be transplanted as close as possible to their original location. Elderberry shrubs may be relocated adjacent to 	<ol style="list-style-type: none"> 1. Retain a qualified biologist. 2. Transplant shrubs that cannot be avoided, where feasible and appropriate. 3. Monitor transplanting activities. 4. Conduct exit hole surveys immediately before transplanting. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. Before construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>the project footprint if: (1) the planting location is suitable for elderberry growth and reproduction; and (2) SRWA and its contractor(s) are able to protect the shrub and ensure that the shrub becomes reestablished. If these criteria cannot be met, the shrub may be transplanted to an appropriate USFWS-approved mitigation site.</p> <ul style="list-style-type: none"> ▪ Elderberry shrubs shall be transplanted in accordance with the following guidelines: <ul style="list-style-type: none"> – A qualified biologist shall be present on site for the duration of transplanting activities to ensure compliance with avoidance and minimization measures and other conservation measures identified in Mitigation Measures BIO-1 and BIO-2 (described above), as well as in the USFWS’ framework document (USFWS 2017). – Exit-hole surveys shall be completed immediately before transplanting. The number of exit holes found, the global positioning system (GPS) location of the plant to be relocated, and the GPS location of the site where the plant is transplanted shall be reported to USFWS and California Natural Diversity Database (CNDDDB). – Elderberry shrubs shall be transplanted when the shrubs are dormant (November through the first 2 weeks in February) and after they have lost their leaves. – Transplanting shall follow the most current version of the Tree Care Industry Association’s American National Standards Institute (ANSI) A300 (Part 6) guidelines for transplanting (Tree Care Industry Association 2017). 			
<p>Mitigation Measure BIO-4: Schedule Air Purging to Avoid or Minimize Increased TSS or Sediment Deposition.</p> <p>To the extent feasible, SRWA and its contractor(s) shall limit air purging of the infiltration gallery to the work period between April 1 and September 30 to avoid increased total suspended solids (TSS) and sediment deposition during peak salmonid spawning migration and</p>	<p>1. Work with NMFS, USFWS, and CDFW to schedule air purging during a suitable period.</p>	<p>1. Before construction</p>	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>sensitive development stages. If air purging must be conducted outside the period between April 1 and September 30, SRWA shall consult with the National Marine Fisheries Service (NMFS), USFWS, and California Department of Fish and Wildlife (CDFW) to identify a suitable work period, based on the hydrologic and biological conditions for the year of testing, that will not result in substantial increases in TSS and sediment deposition to avoid adverse effects on special-status fish.</p>			
<p>Mitigation Measure BIO-5: Minimize Impacts on Nesting Birds with Site Assessments, Surveys, and Avoidance Measures.</p> <p>If vegetation clearing or ground-disturbing activities commence between February 15 and August 31, SRWA or its contractor(s) shall require that a qualified biologist conduct a nesting bird survey within 2 weeks prior to the start of work. If a lapse in project-related work of 2 weeks or longer occurs during this period, another focused survey shall be conducted before project work can be reinitiated.</p> <p>If nesting birds are found, a buffer shall be established around the nest and maintained until the young have fledged. Appropriate buffer widths are 300 feet for non-listed raptors and special-status passerines and 100 feet for non-listed passerines, unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on nesting raptors. Work shall not commence within the buffer until fledglings are fully mobile and no longer reliant upon the nest or parental care for survival.</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct a nesting bird survey within 2 weeks before construction. 3. If a lapse of 2 weeks or longer occurs during construction, conduct another focused survey before construction is reinitiated. 4. If birds are found, establish an appropriate buffer. 5. Monitor nests to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. During construction 4. Before and during construction 5. During construction 	
<p>Mitigation Measure BIO-6: Conduct Nesting Raptor Surveys and Establish Buffers to Avoid or Minimize Impacts on Swainson’s Hawk and White-tailed Kite.</p> <p>If construction occurs between February 1 and August 31, SRWA or its contractor(s) shall require that a qualified biologist conduct surveys for Swainson’s Hawk and White-tailed Kite in accordance with the recommended timing and methodology developed by the Swainson’s Hawk Technical Advisory Committee (2000 or most recent). Surveys will cover a minimum 500-foot radius around the construction area. If nesting Swainson’s Hawk or White-tailed Kite are detected, buffers shall be established around active nests that are sufficient to ensure that</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct surveys for Swainson’s Hawk and White-tailed Kite within a minimum 500-foot radius around construction areas. 3. Establish buffers around active nests. 4. Monitor nests to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>breeding is not likely to be disrupted or adversely affected by construction. Buffers around active nests will be 500 feet unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on nesting raptors. Factors to be considered when determining buffer size include the presence of natural buffers provided by vegetation or topography, nest height, locations of foraging territory, and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.</p>			
<p>Mitigation Measure BIO-7: Conduct Preconstruction Surveys for Burrowing Owls and Avoid or Minimize Impacts.</p> <p>SRWA or its contractor(s) shall require that a qualified biologist conduct a preconstruction survey in all accessible areas of suitable Burrowing Owl habitat within 500 feet of construction activity. Surveys shall be conducted within 14 days before the start of construction activity in accordance with protocols established in the Staff Report on Burrowing Owl Mitigation (California Department of Fish and Game [CDFG] 2012 or current version). If no Burrowing Owls or signs of Burrowing Owls are detected during the survey, no further mitigation shall be required.</p> <p>If a preconstruction survey detects occupied burrows, a buffer shall be established, within which no ground-disturbing or vegetation removal activity is permissible. In accordance with guidance provided by CDFW, buffers around occupied burrows shall be a minimum of 656 feet (200 meters) during the breeding season (February 1 through August 31), and 160 feet (100 meters) during the non-breeding season, unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on the Burrowing Owl burrow.</p> <p>This protected area will remain in effect until the end of the Burrowing Owl nesting season (February 1 through August 31) or until CDFW approves a passive relocation plan. No Burrowing Owls will be relocated from burrows during the Burrowing Owl nesting season.</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct surveys for Burrowing Owls and burrows. 3. Establish buffers around occupied burrows. 4. Monitor burrows to determine when construction activities can begin within the buffer. 5. If burrows are to be relocated, prepare and implement a relocation plan with CDFW approval that includes a monitoring and management plan. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 5. Before and during construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<ul style="list-style-type: none"> ▪ If occupied burrows are to be relocated, a passive relocation plan shall be developed by a qualified biologist and approved by CDFW prior to implementation. SRWA shall enhance or create burrows in appropriate habitat at a 1:1 ratio (burrows destroyed to burrows enhanced or created) one week prior to implementation of passive relocation techniques. If burrowing owl habitat enhancement or creation takes place, SRWA shall develop and implement a monitoring and management plan to assess the effectiveness of the mitigation. The plan shall be subject to the approval of CDFW. 			
<p>Mitigation Measure BIO-8: Conduct Preconstruction Surveys, Establish Buffers around Nests, and Implement Measures to Avoid or Minimize Impacts on Western Pond Turtle (WPT).</p> <p>SRWA or its contractor(s) shall require that preconstruction surveys for WPT are conducted by a qualified biologist 14 days before and 24 hours before the start of construction activities in areas where suitable habitat exists (i.e., riparian areas, freshwater emergent wetlands, and adjacent uplands). If WPTs or their nests are observed during preconstruction surveys, the following measures shall be implemented.</p> <p>WPTs found within the construction area will be allowed to leave on their own volition or will be relocated by a qualified biologist out of harm’s way to suitable habitat immediately upstream or downstream of the project site. To be qualified to move turtles, the biologist shall possess a valid memorandum of understanding from CDFW authorizing the capture and relocation of turtles.</p> <p>If a WPT nest is identified in the work area during preconstruction surveys, a 50-foot no-disturbance buffer shall be established between the nest and any areas of potential disturbance unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on the nest. Buffers will be clearly marked with temporary fencing. Construction will not be allowed to commence in the exclusion area until hatchlings have emerged from the nest or the nest is deemed inactive by a qualified biologist.</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct surveys for WPT 14 days before and 24 hours before construction activities begin in areas of suitable habitat. 3. Allow WPTs to leave the construction area or relocate WPTs to suitable habitat. 4. Establish buffers around WPT nests. 5. Monitor nests to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. During construction 4. Before or during construction 5. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>Mitigation Measure BIO-9: Conduct Preconstruction Surveys and Implement Measures to Avoid or Minimize Impacts on Special Status Bats.</p> <p>SRWA or its contractor(s) shall require that a preconstruction survey is conducted by a qualified bat biologist between May 1 and July 15 to maximize detection of bats during maternity season. The survey shall focus on the Geer Road Bridge and consist of a daytime pedestrian survey to inspect the bridge for indications of bat use (e.g., occupancy, guano, staining, smells, or sounds) and a night roost/emergence survey using night vision equipment and/or infrared-sensitive optical or video equipment. Suitable large trees in the surrounding area will also be inspected for evidence of bat use. Bioacoustic detectors (bat detectors) may be deployed to maximize detection.</p> <p>If the bat biologist determines that the bridge is being used, or is likely to be used, as a bat maternity roost and may be affected by construction, then specific measures will be developed and implemented to minimize impacts on the roost. Such measures may include minimizing construction activity (including truck traffic) under the bridge during the maternity season (May 1-July 15), excluding bats from the roost site prior to the maternity season during the year(s) of construction, or other measures developed by a qualified bat biologist that will minimize the disturbance. If bat exclusion is feasible for the Geer Road Bridge, a plan detailing the specifications for exclusion measures shall be developed by a qualified bat biologist and submitted to CDFW for approval.</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct surveys for bats during maternity season. 3. If bats are using the construction area, develop and implement measures with CDFW approval to minimize impacts on roosts or exclude bats from roost sites. 4. Monitor roosts to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 	
<p>Mitigation Measure BIO-10: Implement Revegetation in Riparian Habitat and Sensitive Natural Communities Disturbed during Construction.</p> <p>SRWA or its contractor(s) shall require that, upon completion of construction, disturbed soils within areas of native vegetation shall be revegetated with site-appropriate native species to limit subsequent encroachment of non-native weeds. Any plants of native woody species of 4 inches dbh or greater that are damaged or removed as a result of construction activity shall be replaced at a 1:1 ratio; this ratio will</p>	<ol style="list-style-type: none"> 1. Develop a revegetation plan for riparian habitat. 2. Revegetate following construction. 3. Monitor the site to determine success, and replace plants as needed. 	<ol style="list-style-type: none"> 1. Before construction 2. After construction 3. After construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>increase to 3:1 for native trees of 24 inches dbh and greater. Replaced woody plant species shall be maintained and monitored to ensure a minimum of 65 percent survival of woody plantings after 3 years.</p>			
Cultural Resources			
<p>Mitigation Measure CUL-1: Conduct Archaeological Survey of the Proposed Water Treatment Plant and Offset Water Facility Locations. Prior to completing the design for the proposed WTP and identifying the locations of offset water facilities and initiating construction, the WTP location, access roads, staging areas, connecting water transmission line routes, and offset water facility locations shall be surveyed for archaeological resources. If an archaeological resource is identified and appears to be more than a superficial scatter of surface materials, and the resource cannot be avoided by project redesign, the resource shall be evaluated for National Register of Historic Places (NRHP)/ California Register of Historical Resources (CRHR) eligibility. Resource evaluation shall be conducted by individuals who meet the U.S. Secretary of the Interior’s professional standards in archaeology. If any of the resource meets the eligibility criteria identified in 36 Code of Federal Regulations (CFR) Part 60.4, Public Resources Code (Pub. Res. Code) Section 5024.1, or State California Environmental Quality Act (CEQA) Guidelines Section 21083.2(g), SRWA will develop and implement mitigation measures in accordance with State CEQA Guidelines Section 15126.4(b).</p>	<ol style="list-style-type: none"> 1. Retain a qualified archaeologist 2. Conduct archaeological surveys of the WTP site and offset water facility sites. 3. If resources are identified and cannot be avoided, evaluate for NRHP/CRHR eligibility. 4. Develop and implement mitigation measures for any eligible resources. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. Before construction 	
<p>Mitigation Measure CUL-2: Suspend Construction Immediately if Cultural Resources Are Discovered, Evaluate All Identified Cultural Resources for CRHR Eligibility, and Implement Appropriate Mitigation Measures for Eligible Resources. Not all cultural resources are visible on the ground surface. If any cultural resources, including structural features, unusual amounts of bone or shell, flaked or ground stone artifacts, historic-era artifacts (e.g., glass, ceramics, metal objects, bricks), human remains, or architectural remains, are encountered during proposed project construction activities, work shall be suspended immediately at the location of the find and within a radius of at least 50 feet and SRWA will be contacted.</p>	<ol style="list-style-type: none"> 1. Retain a qualified archaeologist 2. Halt construction activities in the event any cultural resources are encountered. 3. If cultural resources are uncovered, retain a qualified individual who meets the U.S. Secretary of the Interior’s standards to conduct resource evaluations. 	<ol style="list-style-type: none"> 1. Before construction 2. During construction 3. During construction 4. During construction 5. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>SRWA will engage a qualified archaeologist to evaluate the nature of the finds.</p> <p>All archaeological resources uncovered during construction within the proposed project area of potential effect (APE) shall be evaluated for eligibility for inclusion in the NRHP/CRHR. Resource evaluations shall be conducted by individuals who meet the U.S. Secretary of the Interior’s professional standards. If any of the resources meet the eligibility criteria identified in 36 CFR Part 60.4, Pub. Res. Code Section 5024.1, or State CEQA Guidelines Section 21083.2(g), SRWA will develop and implement mitigation measures in accordance with State CEQA Guidelines Section 15126.4(b) before construction resumes.</p> <p>If the discovered resource is identified as eligible for listing in the NRHP/CRHR and it would be rendered ineligible by the proposed project construction, additional mitigation measures shall be implemented. Mitigation measures for archaeological resources may include (but are not limited to) avoidance; incorporation of sites within parks, greenspace, or other open space; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for archaeological resources shall be developed in consultation with responsible agencies and, as appropriate, interested parties such as Native American tribes. Native American consultation is required if an archaeological site is determined to be a tribal cultural resource. Implementation of any SRWA-approved mitigation is required before resuming any construction activities with the potential to affect identified eligible resources at the site.</p>	<ol style="list-style-type: none"> 4. If uncovered resources meet eligibility criteria, implement mitigation measures consistent with State CEQA Guidelines Section 15126.4(b). 5. If cultural resources are uncovered, mitigation measures will be developed in consultation with SRWA and Native American tribes before construction resumes. 		
<p>Mitigation Measure CUL-3: Suspend Construction Immediately if Paleontological Resources Are Discovered, Evaluate the Significance of the Resources, and Implement Appropriate Mitigation Measures as Necessary.</p> <p>Paleontological resources are not necessarily visible on the ground surface. If any items of paleontological interest are discovered during construction, work shall be suspended immediately within 50 feet of the discovery site, or to the extent needed to protect the site, and SRWA</p>	<ol style="list-style-type: none"> 1. In the event a paleontological item is discovered, halt construction activities within 50 feet of discovery site, or to the extent needed to protect the site, and notify SRWA. 2. Ensure that a qualified paleontologist evaluates the discovery. 	<ol style="list-style-type: none"> 1. During construction 2. During construction 3. During construction 4. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>shall be notified. SRWA will retain a qualified paleontologist to examine the discovery.</p> <p>Any discovery of paleontological resources during construction shall be evaluated by the qualified paleontologist. If it is determined that the proposed project could damage a unique paleontological resource, mitigation shall be implemented in accordance with Pub. Res. Code Section 21083.2 and State CEQA Guidelines Section 15126.4. If avoidance is not feasible, the paleontologist shall develop a treatment plan in consultation with SRWA. Work shall not be resumed until authorization is received from SRWA and any additional mitigation directed by SRWA has been implemented.</p>	<ol style="list-style-type: none"> 3. If the proposed project is determined to cause damage to a unique paleontological resource, mitigation shall be implemented. 4. Paleontologist shall develop a treatment plan if avoidance is not feasible. 5. Authorization will be required from SRWA before work resumes. 	<ol style="list-style-type: none"> 5. During construction 	
<p>Mitigation Measure CUL-4: Halt Construction Immediately if Human Remains Are Discovered and Implement Applicable Provisions of the California Health and Safety Code.</p> <p>If human remains are discovered during construction activities, the requirements of Section 7050.5 of the California Health and Safety Code shall be followed. Potentially damaging excavation shall halt on the proposed project site within a minimum radius of 100 feet of the remains and the County Coroner shall be notified. The Coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Health and Safety Code Section 7050.5[b]). If the Coroner determines that the remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination (Health and Safety Code Section 7050[c]). In accordance with the provisions of Pub. Res. Code Section 5097.98, the Native American Heritage Commission (NAHC) shall identify a Most Likely Descendent (MLD). The MLD designated by the NAHC shall have at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. SRWA or its designee shall work with the MLD to ensure that the remains are removed to a protected location and treated with dignity and respect.</p>	<ol style="list-style-type: none"> 1. Retain a qualified archaeologist 2. In the event that human remains are encountered, halt work and contact the County Coroner. 3. If discovered remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination. 4. NAHC shall identify a MLD, upon which this person shall be notified and given at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. 5. Cooperation with MLD is required. 	<ol style="list-style-type: none"> 1. Before construction 2. During preparation of plans and specifications 3. During construction 4. During construction 5. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<i>Geology, Soils, Seismicity, and Mineral Resources</i>			
None required			
<i>Greenhouse Gas Emissions and Energy Use</i>			
Mitigation Measure AQ-1: Prepare Quantitative Analysis of Construction-related Air Quality and Greenhouse Gas Emissions, and Implement Measures to Cap Emissions. See full description above	1. See above	1. See above	
Mitigation Measure AQ-2. Prepare Quantitative Analysis of Operation-related Air Quality and Greenhouse Gas Emissions, and Implement Measures to Cap Emissions. See full description above	1. See above	1. See above	
<i>Hazards and Hazardous Materials</i>			
Mitigation Measure HAZ-1. Prepare and Implement a Hazardous Materials and Waste Management Plan for Construction and Operation. SRWA or its contractor(s) shall prepare and implement a Hazardous Materials and Waste Management Plan (HMWMP). The HMWMP shall specify hazardous materials handling and spill response procedures applicable to construction activities and to operation of the project sites, including the following information: <ul style="list-style-type: none"> ▪ A list of hazardous materials present on site during construction and operation, to be updated as needed along with product Safety Data Sheets and other information regarding storage, application, transportation, and disposal requirements; ▪ A Hazardous Materials Communication (i.e., HAZCOM) Plan; ▪ Assignments and responsibilities of proposed project hazardous materials handling and spill response roles; ▪ Standards for any secondary containment and countermeasures that will be required for any hazardous materials spill; 	1. Develop a HMWMP that contains the required information and protocols. 2. Implement the HMWMP.	1. Before construction 2. During construction and operation	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<ul style="list-style-type: none"> ▪ Spill response procedures based on product and quantity, which shall include materials to be used, location of such materials within the proposed project area, and disposal protocols; and ▪ Protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction, which will address possible termination of work within the area of suspected contamination, sampling by an Occupational Safety and Health Administration (OSHA)-trained individual, and testing at a certified laboratory. 			
<p>Mitigation Measure HYD/WQ-1. Construct Structures Outside of the FEMA 100-Year Flood Hazard Area or Conduct Floodflow Study and Implement Measures to Reduce the Project’s Effects on Flood Flows. See full description below</p>	<p>1. See below</p>	<p>1. See below</p>	
<p>Mitigation Measure TRANS-1. Prepare and Implement a Construction Traffic Management Plan. See full description below</p>	<p>1. See below</p>	<p>1. See below</p>	
Hydrology and Water Quality			
<p>Mitigation Measure HYD/WQ-1. Construct Structures Outside of the FEMA 100-Year Flood Hazard Area or Conduct Floodflow Study and Implement Measures to Reduce the Project’s Effects on Flood Flows. Prior to final design of the WTP, SRWA or its contractor(s) shall determine if proposed structures associated with the WTP would be located within the 100-year flood hazard area mapped by the Federal Emergency Management Agency (FEMA). If proposed structures would be located within the flood hazard area, SRWA or its contractor(s) shall modify the design, if feasible, to construct such structures outside of the flood hazard area. If it is not feasible to construct such structures outside of the flood hazard area, then SRWA or its contractor(s) shall conduct or commission a floodflow study to determine the effects of WTP structures on water surface elevations and flow velocities in the project area and at adjacent properties. This study may be part of the permit application/</p>	<ol style="list-style-type: none"> 1. Determine if proposed WTP structures would be located within the FEMA 100-year flood hazard area. 2. If so, modify the design to remove structures from the flood hazard area, if feasible. 3. If design modification is not feasible, conduct a floodflow study. 4. If the project would increase average water surface elevations in the flood hazard area, develop and install flood protection infrastructure. 	<ol style="list-style-type: none"> 1. During final design 2. During final design 3. During final design 4. During final design 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>coordination process with the Central Valley Flood Protection Board (CVFPB). If the floodflow study determines that the proposed project would increase average water surface elevations at the project site or adjacent properties, SRWA or its contractor shall develop and install flood protection infrastructure to protect existing structures and assets on adjacent properties from inundation during the 100-year flood event. Such infrastructure may include floodwalls, weirs, levees, or similar works.</p>			
Land Use and Planning			
None required			
Noise			
<p>Mitigation Measure NOI-1. Limit Nighttime Construction Noise. SRWA and its contractor(s) shall ensure that no construction activities are conducted in close proximity to a residence outside the hours of 7:00 a.m.–7:00 p.m. on weekdays and 9:00 a.m.–7:00 p.m. on Saturdays, Sundays, and state or federal holidays unless the project has received a variance or special permit, following procedures outlined in the applicable noise ordinance, to operate outside of these hours.</p>	<ol style="list-style-type: none"> 1. Include mitigation requirements in construction documents. 2. Confirm that construction is taking place within identified hours. 	<ol style="list-style-type: none"> 1. During preparation of plans and specifications. 2. During construction. 	
<p>Mitigation Measure NOI-2. Prepare Detailed Noise Analysis for Proposed Project Operations. As the proposed project is further designed to a level where operational noise levels can be estimated, and prior to commencing operation, SRWA and/or its contractor(s) shall prepare a noise analysis for proposed project operation. The noise study will identify appropriate measures that can be implemented to reduce noise levels to the relevant Community Noise Equivalent Level (CNEL) exterior noise level required by the applicable jurisdictions (Table 3.11-5 for all project features except those located in Ceres, and Table 3.11-8 for the Ceres terminal tank and possibly offset water facilities), or a 3-decibel (dB) increase if existing levels are above the ambient noise level at the property line. If the analysis demonstrates that significant operational noise impacts are likely to occur, measures shall be implemented to</p>	<ol style="list-style-type: none"> 1. Conduct a noise study for proposed project operations. 2. Design the project to reduce noise levels below the required limits. 3. Where operations will remain above required limits, implement noise-reducing measures as indicated. 	<ol style="list-style-type: none"> 1. During final design 2. During final design 3. During final design 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>achieve the required noise reduction. Example measures may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ locating stationary equipment as far as practical from noise-sensitive land uses; ▪ using electrified or otherwise quieter equipment when practical; ▪ using sound-control devices on equipment that are more effective than devices originally provided on the equipment; ▪ installing permanent barriers between noise sources and noise-sensitive land uses, or taking advantage of existing barrier features (terrain and structures) to block sound transmission; ▪ limiting operations and maintenance-related trucking to specific routes, times, or speeds that minimize adverse effects on sensitive land uses such as schools and residential areas; and ▪ using sound attenuation enclosures designed to achieve noise reductions sufficient to comply with City and County standards for noise-generating elements of the operation, when no other feasible control method is available. 			
<p>Mitigation Measure NOI-3. Implement Vibration Reduction Measures. SRWA and/or its contractor(s) shall implement the following vibration-reducing measures during all construction activities, unless specified below, to minimize impacts on nearby sensitive receptors:</p> <ul style="list-style-type: none"> ▪ Ensure proper tuning of vibration-causing equipment. ▪ Use vibration-damping devices to the extent feasible. ▪ Limit use of vibratory equipment to the extent feasible and do not overlap use of multiple pieces of vibratory equipment. Where possible, maintain a distance of 15 feet or more from buildings. ▪ Require contractor(s) to ensure that impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is 	<ol style="list-style-type: none"> 1. Include mitigation requirements in construction documents. 2. Confirm that contractor(s) implement identified measures. 	<ol style="list-style-type: none"> 1. During preparation of plans and specifications 2. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>unavoidable, require use of an exhaust muffler on the compressed air exhaust; this muffler can lower noise levels from the exhaust by up to about 10 A-weighted decibels (dBA). External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.</p> <ul style="list-style-type: none"> ▪ Use electric stationary equipment (e.g., generators) where feasible. ▪ Implement noise and/or vibration shields, such as sound aprons or temporary enclosures with sound-absorbing material, on or around construction equipment, particularly if construction activities are conducted after 7:00 p.m. For all construction activities occurring within 60 feet of residences at any time of day, install a temporary noise and vibration barrier between the project site and the nearest sensitive receptors. Following the completion of construction activities within that distance, the barrier will be removed. 			
<p>Mitigation Measure NOI-4. Employ Noise-reducing Construction and Maintenance Practices.</p> <p>The following measures shall be implemented by SRWA, the Cities, and/or their contractor(s) to reduce adverse effects from construction and maintenance noise:</p> <ul style="list-style-type: none"> ▪ locating stationary equipment as far as practical from noise-sensitive land uses, ▪ using electrified or otherwise quieter equipment when practical, ▪ using sound-control devices on equipment that are more effective than devices originally provided on the equipment, ▪ using noise-reducing enclosures around noise-generating equipment, ▪ installing temporary barriers between noise sources and noise-sensitive land uses, or taking advantage of existing barrier features (terrain and structures) to block sound transmission, and ▪ limiting construction-related trucking to specific routes, times, and speeds that minimize adverse effects to sensitive receptors. 	<ol style="list-style-type: none"> 1. Include mitigation requirements in construction documents. 2. Confirm that contractor(s) implement identified measures. 	<ol style="list-style-type: none"> 1. During preparation of plans and specifications 2. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Population and Housing			
Mitigation Measure TRANS-1. Prepare and Implement a Construction Traffic Management Plan. See full description below	1. See below	1. See below	
Public Services			
None required			
Recreation			
Mitigation Measure REC-1. Coordinate Construction Activities with Stanislaus County Parks and Recreation Department. SRWA or its contractor(s) shall coordinate construction activities with the Stanislaus County Parks and Recreation Department to ensure that reasonable access is maintained to the park to the extent practicable. SRWA or its contractor shall also consult with the County to identify any potential conflicts with planned improvements/enhancements at Fox Grove Regional Park (Stanislaus County 2017). If improvements are planned during the construction period for the proposed project, SRWA and the County shall coordinate their schedules such that project-related construction traffic would not prevent or unreasonably restrict the progress of the County improvements.	1. Coordinate with Stanislaus County Parks and Recreation Department regarding scheduling of construction activities. 2. Adjust schedules as necessary to avoid interfering with planned projects at Fox Grove Regional Park.	1. Before construction 2. Before and during construction	
Mitigation Measure TRANS-1. Prepare and Implement a Construction Traffic Management Plan. See full description below	1. See below	1. See below	
Transportation and Traffic			
Mitigation Measure TRANS-1. Prepare and Implement a Construction Traffic Management Plan. SRWA shall require that the contractor(s) prepare and implement a construction traffic management plan to manage traffic flow during construction, reduce potential interference with local emergency response plans, reduce potential traffic safety hazards, and ensure adequate access for emergency responders. Development and implementation of this plan shall be coordinated with Stanislaus County,	1. SRWA will ensure that the Construction Traffic Management Plan is implemented during construction. 2. Identified haul routes will be recorded in the contract documents.	1. During construction 2. During construction 3. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>the City of Ceres, the City of Turlock, and the City of Hughson. SRWA, the Cities, and/or the construction contractor(s) shall ensure that the plan is implemented during construction. The plan shall include, but will not be limited to, the following measures:</p> <ul style="list-style-type: none"> ▪ Identify construction truck haul routes and timing to limit conflicts between truck and automobile traffic on nearby roads. The identified routes will be designed to minimize impacts on vehicular and pedestrian traffic, circulation, and safety. ▪ Implement comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, warning and detour signs (if required), lane closure procedures (if required), and traffic cones for drivers indicating potential road hazards or detours (if required). ▪ Coordinate construction activities to ensure that one lane of traffic in each direction remains open at all times on East Hatch Road and Berkeley Road, unless flaggers or temporary traffic controls are in place, to provide emergency access. ▪ Evaluate the need to provide flaggers or temporary traffic control on East Hatch Road and Berkeley Road or at key intersections along the construction route during all or some portion of the construction period. ▪ Notify affected adjacent property owners and public safety personnel regarding timing of major deliveries, detours, and lane closures. ▪ Develop a process for responding to and tracking issues pertaining to construction activity impacts on traffic, including identification of an on-site traffic manager. Post 24-hour contact information for the traffic manager on all construction sites. ▪ Document road pavement conditions for all routes that would be used by construction vehicles before and after project construction. Make provisions to monitor the condition of roads used for haul routes so that any damage or debris attributable to haul trucks can be identified and corrected. Roads damaged by construction vehicles shall be repaired to their preconstruction condition. 	<ol style="list-style-type: none"> 3. Implement traffic control measures. 4. Evaluate need for traffic control flaggers. 5. Notify adjacent property owners and public safety personnel regarding timing of major deliveries, detours, and lane closures. 6. Develop process for responding and tracking issues related to construction activity. 7. Post 24-hour contact information for the traffic manager on site. 8. Document road pavement conditions for all routes used for construction. 	<ol style="list-style-type: none"> 4. Before and during construction 5. Before construction 6. Before construction 7. Before construction 8. Before and after construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<i>Tribal Cultural Resources</i>			
Mitigation Measure CUL-2: Suspend Construction Immediately if Cultural Resources Are Discovered, Evaluate All Identified Cultural Resources for CRHR Eligibility, and Implement Appropriate Mitigation Measures for Eligible Resources. See full description above	1. See above	1. See above	
Mitigation Measure CUL-4: Halt Construction Immediately if Human Remains Are Discovered and Implement Applicable Provisions of the California Health and Safety Code. See full description above	1. See above	1. See above	
<i>Utilities and Service Systems</i>			
None required			

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1 **Tables Cited in MMRP**2 **Table 3.3-2.** Attainment Status of the San Joaquin Valley Air Basin (within Stanislaus
3 County) for the State and Federal Ambient Air Quality Standards

Contaminant	Averaging Time	Concentration	State Standards Attainment Status ¹	Federal Standards Attainment Status ²
Ozone (O ₃)	1-hour	0.09 ppm	N (Severe)	See footnote 3
	8-hour	0.070 ppm	N	
		0.075 ppm		N (Extreme)
Carbon Monoxide (CO)	1-hour	20 ppm	U/A	
		35 ppm		U/A
	8-hour	9.0 ppm	U/A	U/A
Nitrogen Dioxide (NO ₂)	1-hour	0.18 ppm	A	
		0.100 ppm ⁵		U/A
	Annual arithmetic mean	0.030 ppm	A	
		0.053 ppm		U/A
Sulfur Dioxide (SO ₂)	1-hour	0.25 ppm	A	
		0.075 ppm		U/A
	24-hour	0.04 ppm	A	
		0.14 ppm		U/A
	Annual arithmetic mean	0.030 ppm		U/A
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	N	
		150 µg/m ³		A
	Annual arithmetic mean	20 µg/m ³	N	
Fine Particulate Matter (PM _{2.5})	24-hour	35 µg/m ³		N (Moderate)
	Annual arithmetic mean	12 µg/m ³	N	N (Moderate)
Sulfates	24-hour	25 µg/m ³	A	
Lead (Pb) ⁶	30-day average	1.5 µg/m ³	A	
Hydrogen Sulfide (H ₂ S)	1-hour	0.03 ppm	U	
Vinyl Chloride ⁶ (chloroethene)	24-hour	0.010 ppm	A	

Contaminant	Averaging Time	Concentration	State Standards Attainment Status ¹	Federal Standards Attainment Status ²
Visibility-Reducing Particles	8-hour (10:00 to 18:00 PST)	See footnote 4	U	

A – attainment ppm – parts per million km – kilometer
 N – nonattainment µg/m³ – micrograms per cubic meter PM₁₀ – particulate matter of aerodynamic radius of 10 microns or less
 U – unclassified PST – Pacific Standard Time PM_{2.5} – particulate matter of aerodynamic radius of 2.5 microns or less

Notes:

- ¹ California standards for O₃, CO (except Lake Tahoe), SO₂ (1-hour and 24-hour averages), NO₂, PM₁₀, and visibility-reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe CO, Pb, H₂S, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour, or 24-hour average (i.e., all standards except for Pb and the PM_{2.5} and PM₁₀ annual standards), some measurements may be excluded. In particular, measurements are excluded that the California Air Resources Board (CARB) determines would occur an average of less than once per year.
- ² National standards shown are the “primary standards” designed to protect public health. National air quality standards are set by the U.S. Environmental Protection Agency (USEPA) at levels determined to be protective of public health with an adequate margin of safety. National standards other than for O₃, particulates, and those based on annual averages are not to be exceeded more than once per year. The 1-hour O₃ standard is attained if, during the most recent 3-year period, the average number of days per year with maximum hourly concentrations above the standard is less than or equal to one. The 8-hour O₃ standard is attained when the 3-year average of the fourth highest daily concentrations is 0.075 ppm (75 parts per billion) or less. The 24-hour PM₁₀ standard is attained when the 3-year average of the ninety-ninth percentile of monitored concentrations is less than 150 µg/m³. The 24-hour PM_{2.5} standard is attained when the 3-year average of ninety-eighth percentiles is less than 35 µg/m³. Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM₁₀ is met if the 3-year average falls below the standard at every site. The annual PM_{2.5} standard is met by spatially averaging annual averages across officially designated clusters of sites and then determining whether the 3-year average of these annual averages falls below the standard.
- ³ The national 1-hour O₃ standard was revoked by USEPA on June 15, 2005. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. However, the attainment status has not yet been updated based on this revised 8-hour standard. It is likely that the region will remain in nonattainment.
- ⁴ Statewide Visibility-Reducing Particle Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per km when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment resulting from regional haze and is equivalent to a 10-mile nominal visual range.
- ⁵ To attain this standard, the 3-year average of the ninety-eighth percentile of the daily maximum 1-hour average at each monitoring station within an area must not exceed 0.100 ppm (effective January 22, 2010).
- ⁶ CARB has identified Pb and vinyl chloride as toxic air contaminants with no threshold level of exposure below which there are no adverse health effects determined. Although the vinyl chloride CAAQS remains in force, current regulatory efforts are under CARB’s Air Toxics Program.

Sources: SJVAPCD 2017, CARB 2017, USEPA 2017

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1 **Table 3.3-3.** Applicable SJVAPCD Construction and Operational Significance Thresholds
2 under CEQA

Pollutant	Construction Emissions Threshold (tons/year)	Operational Permitted Activities (tons/year)	Operational Non-permitted activities (tons/year)
Carbon monoxide (CO)	100	100	100
Oxides of nitrogen (NO _x ; ozone precursor)	10	10	10
Reactive organic gases (ROG; ozone precursor)	10	10	10
Sulfur oxides (SO _x)	27	27	27
Particulate matter (PM ₁₀)	15	15	15
Fine particulate matter (PM _{2.5})	15	15	15

3 *Source: SJVAPCD 2015*

1 **Table 3.11-5. Maximum Allowable Noise Exposure from Stationary Noise Sources**

	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Hourly L_{eq} , dBA	55	45
Maximum level, dBA	75	65

2 **Notes:** dBA = A-weighted decibel; L_{eq} = equivalent noise level3 Each of the noise level standards specified in [General Plan] Table IV-24 [as reproduced here] shall be reduced
4 by five (5) dBA for pure tone noises, noise consisting primarily of speech or music, or for recurring impulsive
5 noises. The standards in this table should be applied at a residential or other noise-sensitive land use and not on
6 the property of a noise-generating land use. Where measured ambient noise levels exceed the standards, the
7 standards shall be increased to the ambient levels.8 *Source: Stanislaus County 2016, Table IV-24*9 **Table 3.11-8. Noise Level Performance Standards for New Projects Affected by or**
10 **Including Non-Transportation Sources**

Noise Level Descriptor	Daytime (7a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly L_{eq} , dB	55	45
Maximum level, dB	75	65

Note: Each of the noise levels specified above shall be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

Source: City of Ceres 1997, Table 7-1.

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