INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION

FOR THE

RD 404 VAN BUSKIRK LEVEE CUTOFF WALL

Stockton, CA

September 12, 2017

Prepared for:

Reclamation District No. 404
235 East Weber Avenue
Stockton, CA 95202
209-465-5883

Prepared by:

BaseCamp Environmental
115 S. School Street, Suite 14
Lodi, CA 95240
209-224-8213

BaseCamp Environmental

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LIST OF ACRONYMS USED IN THIS DOCUMENT

AB	Assembly Bill
ARB	California Air Resources Board
BMP	Best Management Practice
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CVFPB	Central Valley Flood Protection Board
dB	decibel
dBA	A-weighted decibel
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act (federal)
FEMA	Federal Emergency Management Agency
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	greenhouse gas
IS	Initial Study
ITMM	Incidental Take Minimization Measure
L_{eq}	equivalent sound level
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
NEPA	National Environmental Policy Act
NO_x	nitrogen oxide
PM_{10}	particulate matter 10 micrometers or less in diameter
$PM_{2.5}$	particulate matter 2.5 micrometers or less in diameter
RCEM	Road Construction Emissions Model
RD 404	Reclamation District No. 404
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SJCOG	San Joaquin Council of Governments
SJMSCP	San Joaquin County Multi-Species Open Space and Habitat Conservation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

NEGATIVE DECLARATION

A. General Project Information

Project Title:	RD 404 Van Buskirk Levee Cutoff Wall
Lead Agency Name and Address:	Reclamation District No. 404 235 East Weber Avenue Stockton, CA 95202
Contact Person and Phone Number:	Erik Almaas, P.E. (209) 946-0268
Project Location:	Along north bank of French Camp Slough, Stockton, CA
Project Sponsor Name and Address:	Reclamation District No. 404 235 East Weber Avenue Stockton, CA 95202
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	The project proposes to improve approximately 1,200 linear feet of an earthen levee along the north bank of French Camp Slough by installing a cutoff wall into the levee. The cutoff wall would consist of sheetpiles that would be driven from the levee top down to a depth of approximately 30 feet. An all-weather access road would be constructed on the levee top after installation of the cutoff wall.
Surrounding Land Uses and Setting:	The Van Buskirk Municipal Golf Course is adjacent to the project site on the land side of the levee. French Camp Slough and associated riparian vegetation is on the water side.
Other Public Agencies Whose Approval is Required:	Central Valley Flood Protection Board (encroachment permit), U.S. Army Corps of Engineers (Section 408 permit).

B. Environmental Factors Potentially Affected

The environmental factors checked below may be significantly affected by this project, involving at least one impact that is a "Potentially Significant Impact" prior to mitigation. Mitigation measures that would avoid potential effects or reduce them to a less than significant level have been prescribed for each of these effects, as described in the checklist and narrative on the following pages, and in the Summary Table at the end of Chapter 1.0.

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

C. Lead Agency Determination

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

√ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project and/or mitigation measures that would reduce potential effects to a less than significant level have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. All applicable mitigation measures are shown in the Summary Table (Table 1-1) at the end of Chapter 1.0.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

RECLAMATION DISTRICT NO. 404

Dante J. Nomellini, Jr., Secretary

9/11/2017
Date

1.0 INTRODUCTION

1.1 Project Brief

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) for the Van Buskirk Cutoff Wall Project (project). The project site is located on the north bank of French Camp Slough approximately one-half mile west of Interstate 5 in Stockton, California (Figures 1-1 through 1-4). The IS/MND has been prepared in compliance with the requirements of the California Environmental Quality Act (CEQA). Reclamation District No. 404 (RD 404) is the CEQA Lead Agency for the project.

The project involves the improvement of approximately 1,200 linear feet of an earthen levee along the north bank of French Camp Slough, adjacent to the Van Buskirk Municipal Golf Course in southwestern Stockton. The project proposes the installation of a cutoff wall into the levee. The cutoff wall would consist of sheetpiles that would be driven from the levee top to a depth of approximately 30 feet. An all-weather access road would be constructed on the levee top after installation of the cutoff wall.

The project would require Section 408 approval from the U.S. Army Corps of Engineers (USACE). Other federal approvals or permits are not anticipated. State approvals would include an encroachment permit from the Central Valley Flood Protection Board (CVFPB). No other state approvals or permits are anticipated.

1.2 Purpose of Initial Study

CEQA requires that public agencies document and consider the potential environmental effects of the agency's actions that meet CEQA's definition of a "project." Briefly summarized, a "project" is an action that has the potential to result in direct or indirect physical changes in the environment. A project includes the agency's direct activities as well as activities that involve public agency approvals or funding. Guidelines for an agency's implementation of CEQA are found in the "CEQA Guidelines" (Title 14, Chapter 3 of the California Code of Regulations).

Provided that a project is not exempt from CEQA, the first step in the agency's consideration of its potential environmental effects is the preparation of an Initial Study. The purpose of an Initial Study is to determine whether the project would involve "significant" environmental effects as defined by CEQA and to describe feasible mitigation measures that would avoid significant effects or reduce them to a less than significant level. In the event that the Initial Study does not identify significant effects, or identifies mitigation measures that would reduce all of the significant effects of the project to a less than significant level, the agency prepares a Negative Declaration. If this is not the case – that is, if the project would involve significant effects that cannot be readily mitigated - the agency must prepare an Environmental Impact Report (EIR). The agency may also decide to proceed directly with the preparation of an EIR without preparation of an Initial Study.

The proposed levee improvements are a "project" as defined by CEQA and are not exempt from CEQA consideration. RD 404 determined that the project involves the potential for significant environmental effects and thus required preparation of this Initial Study. The Initial Study

describes the proposed project and describes its environmental setting; it discusses the potential environmental effects of the project and identifies feasible mitigation measures that would reduce the potentially significant environmental effects of the project to a level that is less than significant. The Initial Study considers the project's potential for significant environmental effects in the following subject areas:

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

The Initial Study concludes that the project would have significant environmental effects, but that all of these effects would be reduced to a less than significant level with recommended mitigation measures. As a result, RD 404 has prepared a Mitigated Negative Declaration and notified the public of the District's intent to adopt the IS/MND. As of the distribution of the IS/MND for public review, the applicant has accepted all of the recommended mitigation measures. The time available for comment on the IS/MND is shown in the Notice of Intent.

1.3 Project Background

RD 404, also known as Boggs Tract, is a reclaimed area approximately 2,550 acres in size in southwestern Stockton. Once used for agriculture, RD 404 is now a developed urban area containing a mix of primarily residential and industrial land uses. RD 404 maintains approximately 4.8 miles of levees that provide flood protection for the Boggs Tract area.

Approximately 4.1 miles of levees maintained by RD 404 are part of the USACE National Levee Safety Program. These are classified as "Project levees." Project levees are subject to federal inspection, and alteration of a project levee may proceed only after the USACE has approved said alteration. The levee along the north bank of French Camp Slough, a section of which is the subject of this project, is a Project levee. During the high water event of 1996-97, significant seepage was observed along the section of the French Camp Slough levee at the project site. A geotechnical report on the RD 404 levees recommended mitigation be implemented for this levee section to meet USACE guidance for seepage, with a cutoff wall being the recommended mitigation (ENGEO 2011). RD 404 proposes this project to prevent a recurrence of seepage and to maintain the structural integrity of the levee section.

1.4 Environmental Evaluation Checklist Terminology

The project's potential environmental effects are evaluated in the Environmental Evaluation Checklist shown in Chapter 3.0. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, RD 404 determines whether the project would involve: 1) a Potentially Significant Impact, 2) a Less Than Significant Impact, 3) a Less Than Significant Impact With Mitigation Incorporated, or 4) No Impact.

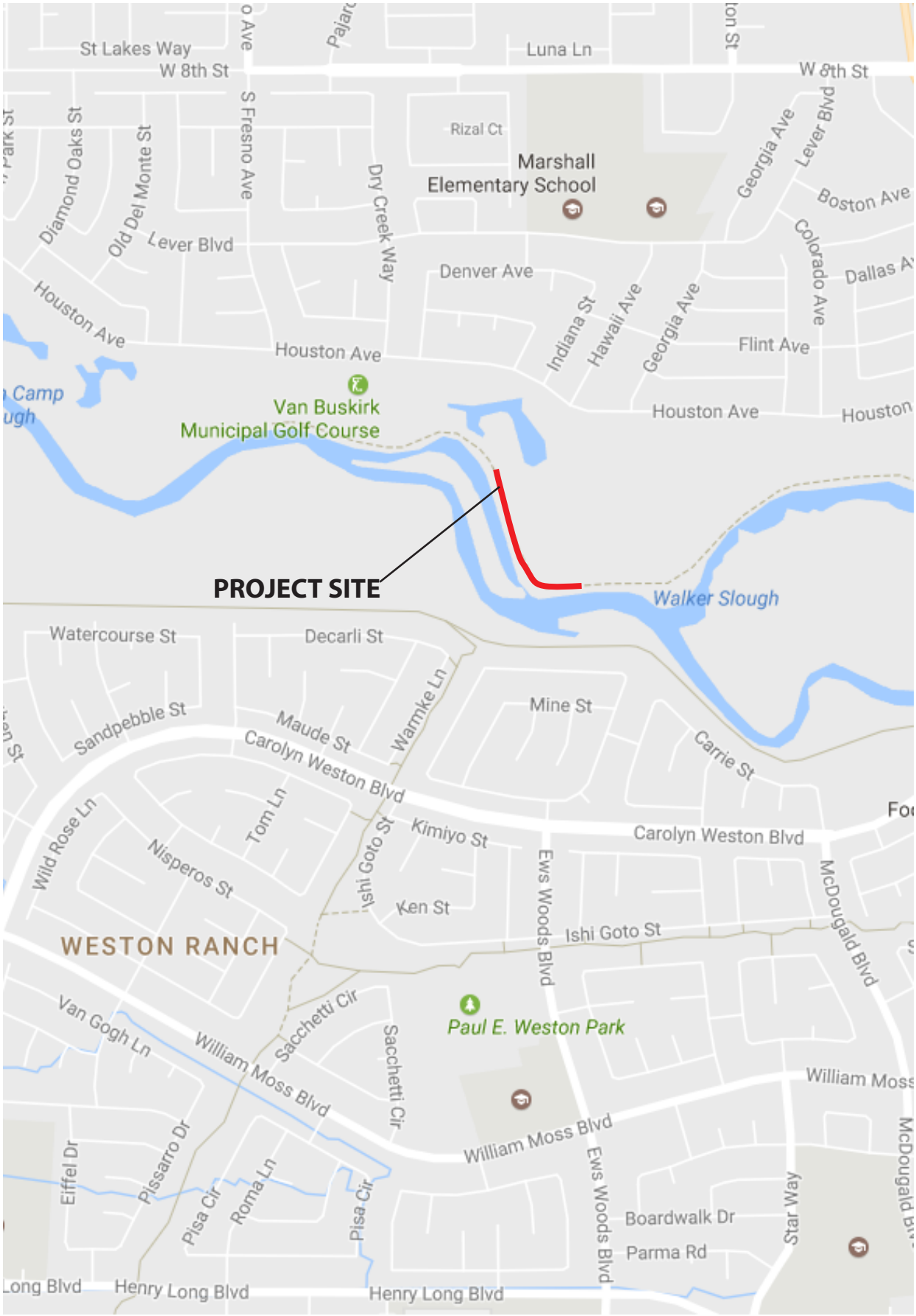
> A Potentially Significant Impact occurs when there is substantial evidence that the project would involve a substantial adverse change to the physical environment, i.e., that the environmental effect may be significant, and mitigation measures have not been defined that would reduce the impact to a less than significant level. If there are one or more Potentially Significant Impact entries in the Initial Study, an EIR is required.
>
> A Less Than Significant Impact occurs when the project would involve effects on a particular resource, but the project would not involve a substantial adverse change to the physical environment, and no mitigation measures are required.
>
> An environmental effect that is Less Than Significant With Mitigation Incorporated is a Potentially Significant Impact that can be avoided or reduced to a level that is less than significant with the application of mitigation measures.
>
> A determination of No Impact is self-explanatory.

This IS/MND prescribes mitigation measures for the potentially significant environmental effects of the project. Mitigation measures that are not already established in law and practice are identified in this document.

1.5 Summary of Environmental Effects and Mitigation Measures

Table 1-1, at the end of this chapter, is a summary of the environmental impacts of the proposed project and mitigation measures. The table summarizes the results of the Environmental Checklist Form and associated narrative discussion shown in Chapter 3.0. The potential environmental impacts are listed in the left-most column of this table. The level of significance of each impact is indicated in the second column. Mitigation measures proposed to minimize the impacts, if necessary are shown in the third column, and the significance of the impact after mitigation measures are applied is shown in the fourth column.

Figure 1-1
REGIONAL LOCATION MAP



BaseCamp Environmental

Figure 1-2
STREET MAP

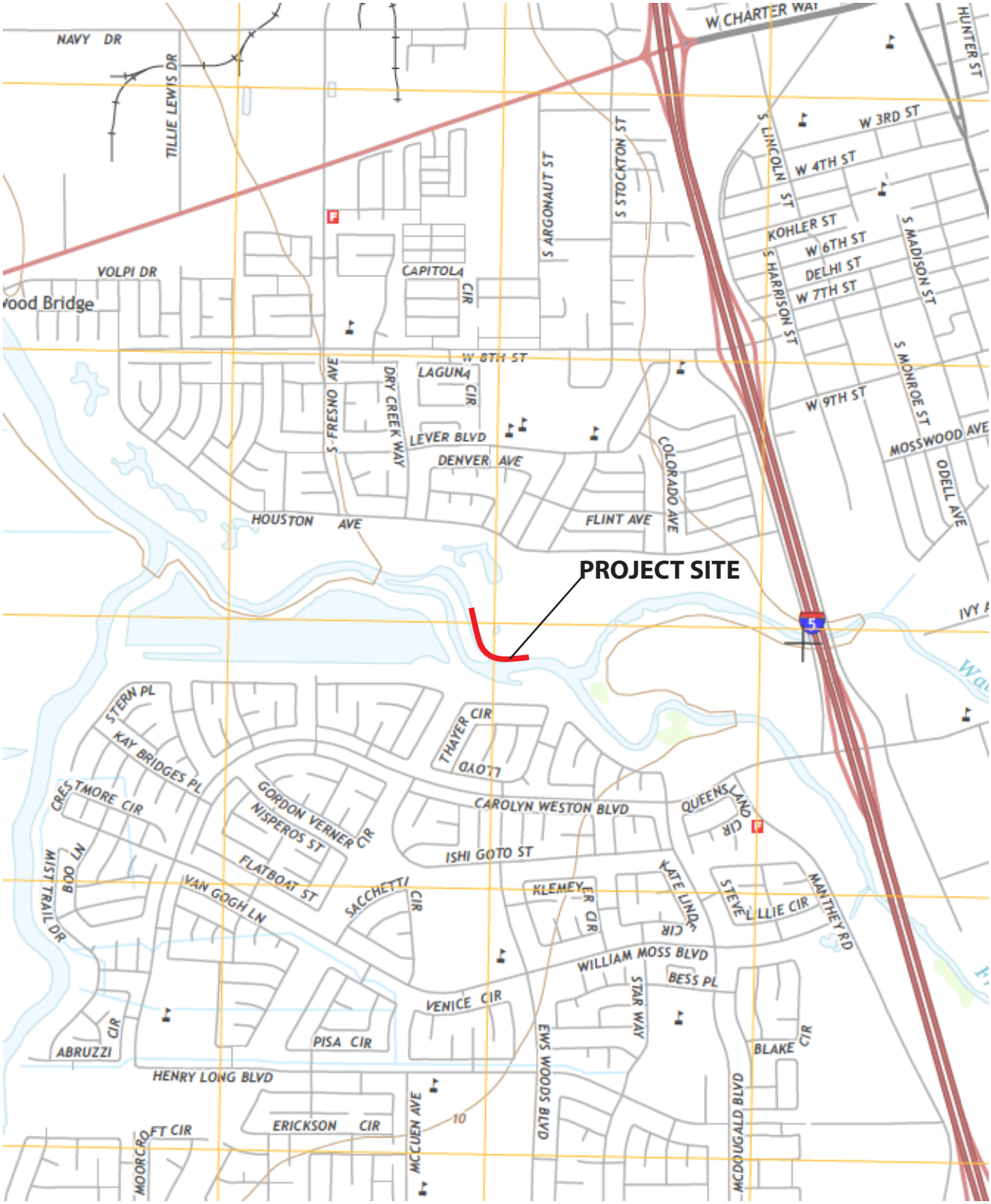


Figure 1-3
USGS MAP

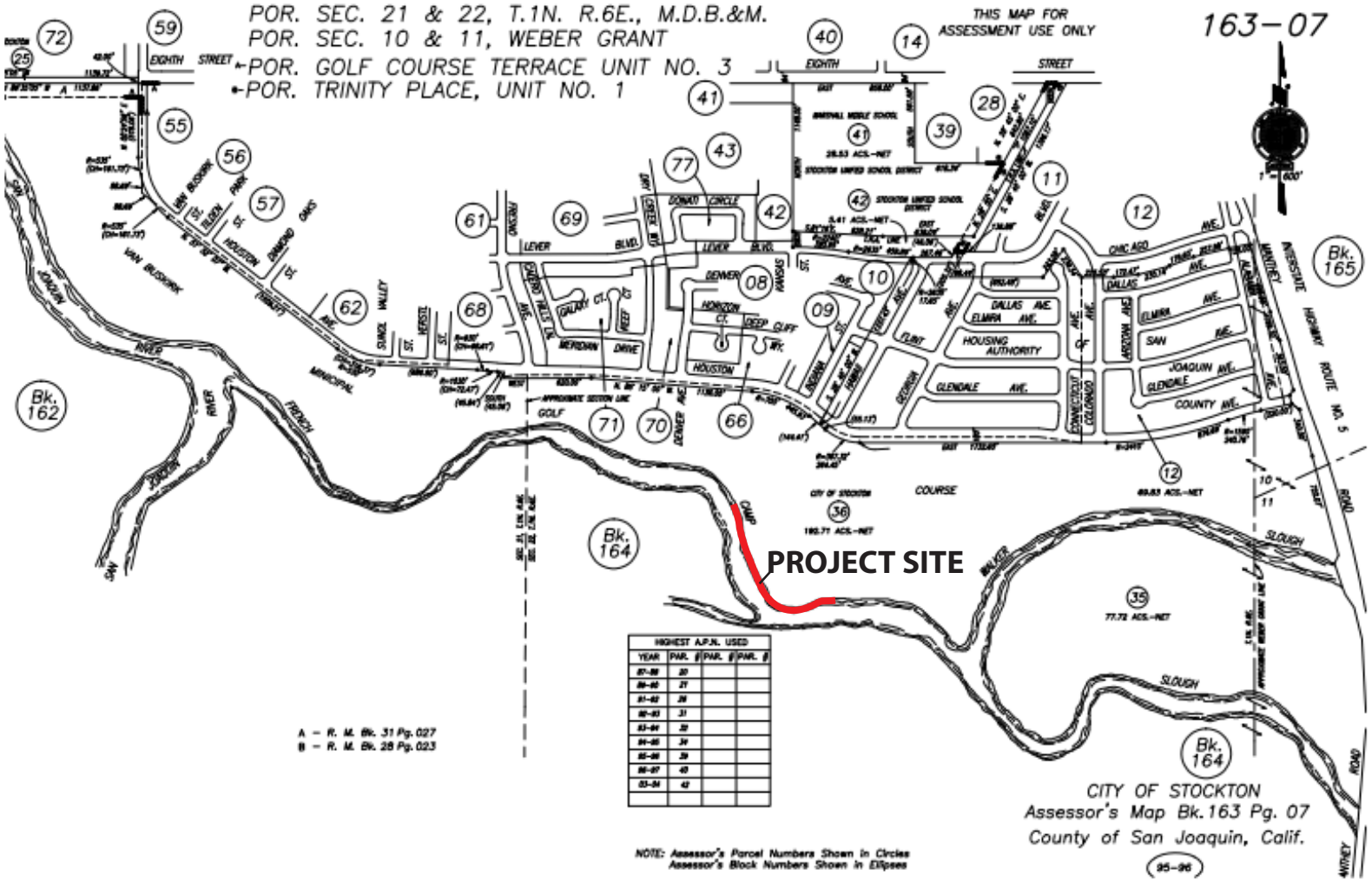


Figure 1-4
ASSESSOR PARCEL MAP

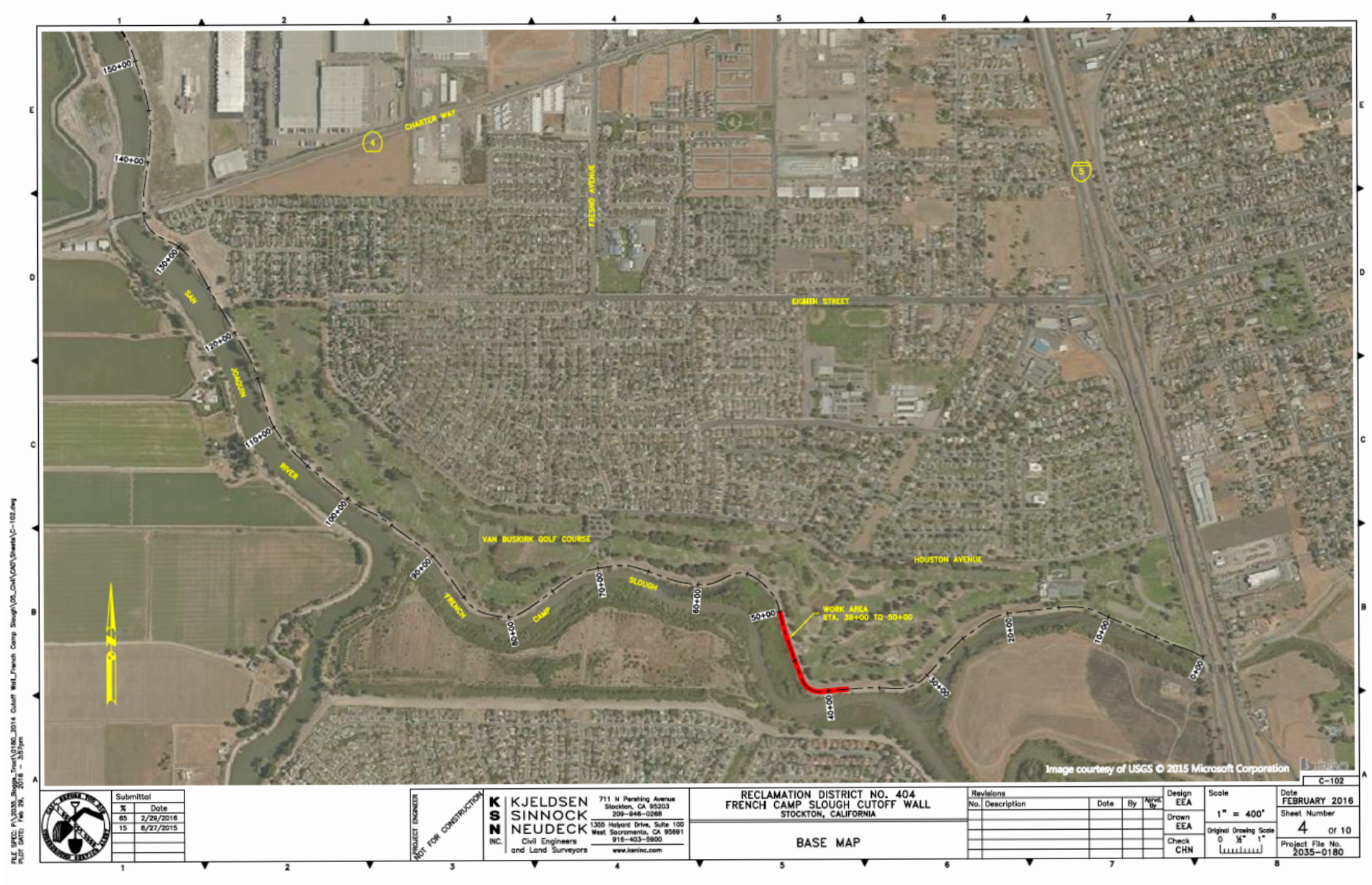


Figure 1-5
AERIAL PHOTO

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.1 AESTHETICS			
a) Scenic Vistas	NI	None required	-
b) Scenic Resources	NI	None required	-
c) Visual Character and Quality	LS	None required	-
d) Light and Glare	LS	None required	-
3.2 AGRICULTURE AND FORESTRY RESOURCES			
a) Agricultural Land Conversion	NI	None required	-
b) Agricultural Zoning and Williamson Act	NI	None required	-
c, d) Forest Land Conversion and Zoning	NI	None required	-
e) Indirect Conversion of Farmland and Forest Land	NI	None required	-
3.3 AIR QUALITY			
a) Air Quality Plan Consistency	NI	None required	-
b) Violation of Air Quality Standards	LS	None required	-
c) Cumulative Emissions	NI	None required	-
d) Exposure of Sensitive Receptors	LS	None required	-
e) Odors	NI	None required	-
3.4 BIOLOGICAL RESOURCES			
a) Effects on Special-Status Species	PS	BIO-1: In order to avoid take of protected raptors and migratory birds between February 1 and August 31, an initial pre-construction nest survey shall be conducted by	LS

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		a CDFW-approved biologist. The survey shall be conducted within 15 days prior to the beginning of construction activities in order to identify active nests within 500 feet of the project work areas, and active raptor nests within one-quarter mile (1,320 feet) of the project work areas. The surveys shall incorporate methodologies from CDFW's 1994 Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California and the 2000 Swainson's Hawk Technical Advisory Committee survey guidelines. If active raptor nests are found within 1,320 feet of the work area, or other active nests within 500 feet of the work area, a temporary buffer of 1,320 feet and 500 feet, respectively, shall be established and an on-site biologist/monitor experienced with raptor behavior shall be retained by RD 404. The biologist shall monitor the nest(s) and consult with the CDFW to determine the buffers to be applied and best course of action to avoid nest abandonment or take of individuals. The necessity and extent for temporal construction restrictions shall be determined by CDFW. CDFW may determine it is necessary for a designated biologist/monitor to be on-site daily while construction-related activities are within or near buffer areas. The on-site biologist/monitor shall have authority to stop work if raptors are exhibiting agitated behavior such as defensive flights at intruders, unusual getting up from a brooding position or unusual flying off the nest. If, during the nesting season, there is a lapse in project-related work of 15 days or longer, another focused survey shall be performed and the results sent to CDFW prior to resuming work. BIO-2: Preconstruction surveys for burrowing owl shall be undertaken for construction activities between February 1	

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		and August 31. The surveys shall incorporate methodologies from CDFW's 2012 Staff Report on Burrowing Owl Mitigation and the 1993 California Burrowing Owl Consortium Burrowing Owl Survey Protocol and Mitigation Guidelines. In the event that nesting owls are located within 250 feet of the work areas, temporal construction restrictions may be necessary to eliminate the potential for noise disturbance to the burrowing owls. The necessity and extent for temporal construction restrictions as to nesting burrowing owls is dependent upon location of the nest with respect to construction and shall be determined by CDFW as described above. BIO-3: Any vegetation removal during the avian nesting season (February 1 through August 31) shall be immediately preceded by a survey. If active nests are found, adequate marking of the nest site shall be provided and vegetation removal in the vicinity of the nest shall be delayed until the young fledge. No further mitigation shall be implemented if no active bird nests are found. For construction in the non-nesting season (September 1 through January 31), RD 404 shall consult with CDFW regarding the appropriate pre-construction surveys, and avoidance and minimization measures. BIO-4: If a Pacific pond turtle is observed, it should be left alone to move out of the area on its own or may be relocated by a qualified biologist to a suitable aquatic habitat outside of the work area. RD 404 shall exercise measures to avoid direct injury to Pacific pond turtle, as well as measures to avoid areas where they are observed to occur. Pre-construction surveys for Pacific pond turtle and their nests, which will involve a search for nests in uplands on the landside of the levees, will be conducted prior to construction work between April 1 and October	

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		31. If nest sites are located, RD 404 will notify CDFW and a 50-foot buffer area around the nest shall be staked and work will be delayed until hatching is complete and the young have left the nest site. BIO-5: A biological worker awareness training program shall be implemented to educate the construction crews of the biological diversity within the project area. The worker awareness program shall include a presentation on the life history and legal status of potentially occurring special-status species and distribution of informational packages to each worker. While all of the species in Table 2 of the biological assessment (see Appendix B of this IS/MND) will be at least briefly addressed, the focal species of the worker awareness training program will be Swainson's hawk, burrowing owl, and Pacific pond turtle. A copy of the District's Biological Avoidance and Minimization Measures will be kept on site for reference for the duration of the project.	
b) Riparian and Other Sensitive Habitats	NI	None required	-
c) Wetlands and Waters of the U.S.	LS	None required	-
d) Fish and Wildlife Movement	PS	Mitigation Measures BIO-1 and BIO-3.	LS
e) Local Biological Requirements	NI	None required	-
f) Conflict with Habitat Conservation Plans	LS	None required	-
3.5 CULTURAL RESOURCES			
a) Historical Resources	NI	None required	-
b) Archaeological Resources	PS	CULT-1: If any subsurface cultural or paleontological resources are encountered during construction of the project, all construction activities in the vicinity of the	LS

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		encounter shall be halted until a qualified archaeologist, or paleontologist as appropriate, can examine these materials, make a determination of their significance and, if significant, recommend further mitigation measures that would reduce potential effects to a less than significant. Such measures could include 1) preservation in place or 2) excavation, recovery and curation by qualified professionals. The Reclamation District shall be responsible for retaining qualified professionals, implementing recommended mitigation measures and documenting mitigation efforts in a written report, consistent with the requirements of the CEQA Guidelines.	
c) Paleontological Resources	PS	Mitigation Measure CULT-1.	LS
d) Human Burials	LS	None required	-
3.6 GEOLOGY AND SOILS			
a-1) Fault Rupture Hazards	NI	None required	-
a-2, 3) Seismic Hazards	LS	None required	-
a-4) Landslides	NI	None required	-
b) Soil Erosion	LS	None required	-
c) Geologic Instability	LS	None required	-
d) Expansive Soils	LS	None required	-
e) Adequacy of Soils for Sewage Disposal	NI	None required	-
3.7 GREENHOUSE GAS EMISSIONS			
a, b) Project GHG Emissions and Consistency with GHG Reduction Plans	LS	None required	-

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.8 HAZARDS AND HAZARDOUS MATERIALS			
a) Transport, Use, and Disposal of Hazardous Materials	NI	None required	-
b) Hazardous Material Releases	LS	None required	-
c) Hazardous Material Emissions near Schools	NI	None required	-
d) Hazardous Materials Sites	NI	None required	-
e, f) Public Airports and Private Airstrips	NI	None required	-
g) Emergency Response and Evacuation	NI	None required	-
h) Wildland Fire Hazards	NI	None required	-
3.9 HYDROLOGY AND WATER QUALITY			
a, f) Surface Waters and Water Quality	LS	None required	-
b) Groundwater Supplies and Quality	NI	None required	-
c, d, e) Drainage and Runoff	NI	None required	-
g, h) Flooding Hazards	LS	None required	-
i) Dam and Levee Failure Hazards	NI	None required	-
j) Seiche, Tsunami and Mudflow	NI	None required	-
3.10 LAND USE AND PLANNING			
a) Division of Established Communities	NI	None required	-
b) Conflict with Actions Adopted to Avoid or Minimize Environmental Impacts	LS	None required	-

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
c) Conflict with Habitat Conservation Plans	LS	None required	-
3.11 MINERAL RESOURCES			
a, b) Availability of Mineral Resources	NI	None required	-
3.12 NOISE			
a) Exposure to Noise Levels Above Standards	PS	NOISE-1: All construction equipment used at the project site shall be fitted with mufflers in accordance with manufacturers' specifications. Mufflers shall be installed on the equipment at all times on the construction site.	LS
b) Groundborne Vibrations	LS	None required	-
c) Permanent Increase in Ambient Noise Levels	NI	None required	-
d) Temporary or Periodic Increase in Ambient Noise Levels	PS	Mitigation Measure NOISE-1.	LS
e, f) Noise from Public Airports and Private Airstrips	NI	None required	-
3.13 POPULATION AND HOUSING			
a) Population Growth Inducement	NI	None required	-
b, c) Displacement of Housing or People	NI	None required	-
3.14 PUBLIC SERVICES			
a) Fire Protection	NI	None required	-
b) Police Protection	NI	None required	-
c) Schools	NI	None required	-

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
d, e) Parks and Other Public Facilities	NI	None required	-
3.15 RECREATION			
a, b) Recreational Facilities	NI	None required	-
3.16 TRANSPORTATION/TRAFFIC			
a) Consistency with Applicable Plans, Ordinances and Policies	NI	None required	-
b) Conflict With Congestion Management Program	NI	None required	-
c) Air Traffic Patterns	NI	None required	-
d, e) Traffic Hazards and Emergency Access	NI	None required	-
f) Conflict with Non-vehicular Transportation Plans	NI	None required	-
3.17 TRIBAL CULTURAL RESOURCES			
a, b) Tribal Cultural Resources	LS	None required	-
3.18 UTILITIES AND SERVICE SYSTEMS			
a, e) Wastewater Systems	NI	None required	-
b, d) Water Systems and Supply	NI	None required	-
c) Stormwater Systems	NI	None required	-
f, g) Solid Waste Services	NI	None required	-
3.19 MANDATORY FINDINGS OF SIGNIFICANCE			
a) Findings on Biological and Cultural Resources	PS	Mitigation measures in Sections 3.4 and 3.5.	LS

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
b) Findings on Cumulatively Considerable Impacts	LS	None required	-
c) Findings on Adverse Effects on Human Beings	NI	None required	-

LEGEND: NI = No Impact; LS = Less than Significant; PS = Potentially Significant

2.0 PROJECT DESCRIPTION

2.1 Project Brief

The project involves the improvement of approximately 1,200 linear feet of an earthen levee along the north bank of French Camp Slough, adjacent to the Van Buskirk Municipal Golf Course in southwestern Stockton. The project proposes the installation of a cutoff wall into the levee. The cutoff wall would consist of sheetpiles which would be driven from the levee top down to a depth of approximately 30 feet. Alternatively, a cutoff wall constructed by means of deep soil mixing methods may be installed. An all-weather access road would be constructed on the levee top after installation of the cutoff wall.

The project would require Section 408 approval from the USACE. Other federal approvals or permits are not anticipated, as no work is expected to occur below the ordinary high water mark of French Camp Slough. State approvals would include an encroachment permit from the CVFPB. No other state approvals or permits are anticipated, as no work is expected to in the French Camp Slough channel or banks.

2.2 Project Location

The project site is located on the north bank of French Camp Slough in southwestern Stockton, approximately 0.75 miles west of Interstate 5 (see Figures 1-1 through 1-4). The site is shown on the USGS Stockton West, California, 7.5-minute quadrangle map as located within the Moss Tract in Township 1 North, Range 6 East, Mt. Diablo Base and Meridian. Approximate latitude is 37° 55' 04" North, and approximate longitude is 121° 18' 20" West.

2.3 Project Objectives

The objective of the project is to improve the structural integrity of a section of levee along the Calaveras River by eliminating a seepage problem. This would reduce the probability of a breach at this section, thereby reducing the probability of flooding, with its attendant economic and social costs, of adjacent urban development in Stockton that is mainly residential.

2.4 Project Details

As noted in Chapter 1.0, Introduction, RD 404 maintains approximately 4.1 miles of levees as part of the USACE Levee Safety Program, including a levee along the north bank of French Camp Slough. The project proposes to install a cutoff wall within a 1,200-foot linear section of this French Camp Slough levee, from approximately Station 38+00 to Station 50+00 (Figures 2-1 and 2-2). The cutoff wall is proposed to be constructed by one of two methods: deep soil mixing or sheet piling. The sheet piling is the preferred method of construction, subject to USACE approval. Deep soil mixing, which would involve installation of a slurry wall with a soil-bentonite mix, was considered but ultimately rejected due to its greater environmental impact.

Project work would occur within a 20-foot wide segment at the top of the levee (Figure 2-3). The project proposes to excavate soil within the levee where the sheet piling would be installed. Sheet

piling, to consist of either polyethylene vinyl or steel, would be installed to a depth of approximately 30 feet from the top of the levee. The sheet piling would be continuous along the entire levee section. Figure 2-3 shows a typical section of the proposed piling installation. Once the sheet piling is installed, the installation area would be backfilled with imported fill material. The excavated soil would be disposed offsite, as would all other materials cleared and removed from the project site by the contractor.

The project also proposes to install an all-weather road on top of the levee section where the cutoff wall would be installed. The road would consist of an aggregate base with a minimum thickness of 6 inches. The road subgrade would be scarified 6 inches, moisture conditioned, and re-compacted prior to installation of the aggregate base.

The project would occur within existing RD 404 property and easements; no additional land would need to be acquired. Project work would occur within the existing levee footprint; existing levee configuration and width would be retained. The contractor shall clear and grub all work areas prior to construction. Upon completion of construction work, the contractor shall restore the project site and other disturbed areas to their pre-project condition. Construction vehicle and equipment access to the project site would be available through an existing road on top of the levee, access to which is gated. It is expected that construction equipment and vehicles would enter the levee road from Manthey Road.

The contractor shall be responsible for determining the actual location of all underground, surface, overhead, golf course and submarine improvements, including overhead power lines. The contractor shall contact Underground Service Alert (USA) and the respective utility companies prior to commencement of work. Overhead high-voltage power lines cross over the project site from approximately Stations 44+00 to 45+00 and would remain in place throughout the project. The contractor shall identify these overhead power lines within the construction zone.

2.5 Permits and Approvals

RD 404 is the local agency responsible for the levee. As such, approval from the RD 404 Board would be required to proceed with the project. The approval must be preceded by adoption of this IS/MND, along with a Mitigation Monitoring and Reporting Program to ensure implementation of mitigation measures specified in the IS/MND.

The project also would require an encroachment permit from the CVFPB. The CVFPB is the state regulatory agency responsible for ensuring that appropriate standards are met for the construction, maintenance, and protection of the flood control system in the Central Valley.

As part of the approval process of the project, CVFPB will request a determination of USACE, pursuant to Section 14 of the Rivers and Harbors Act of 1899 (Title 33 of the United States Code Section 408 [33 USC 408], hereinafter referred to as "Section 408"), for the alteration or occupation or use of the Federal flood management project. The Section 408 process triggers a requirement for compliance with the National Environmental Policy Act (NEPA). A separate Environmental Assessment for this project is being prepared for the USACE to comply with NEPA requirements.

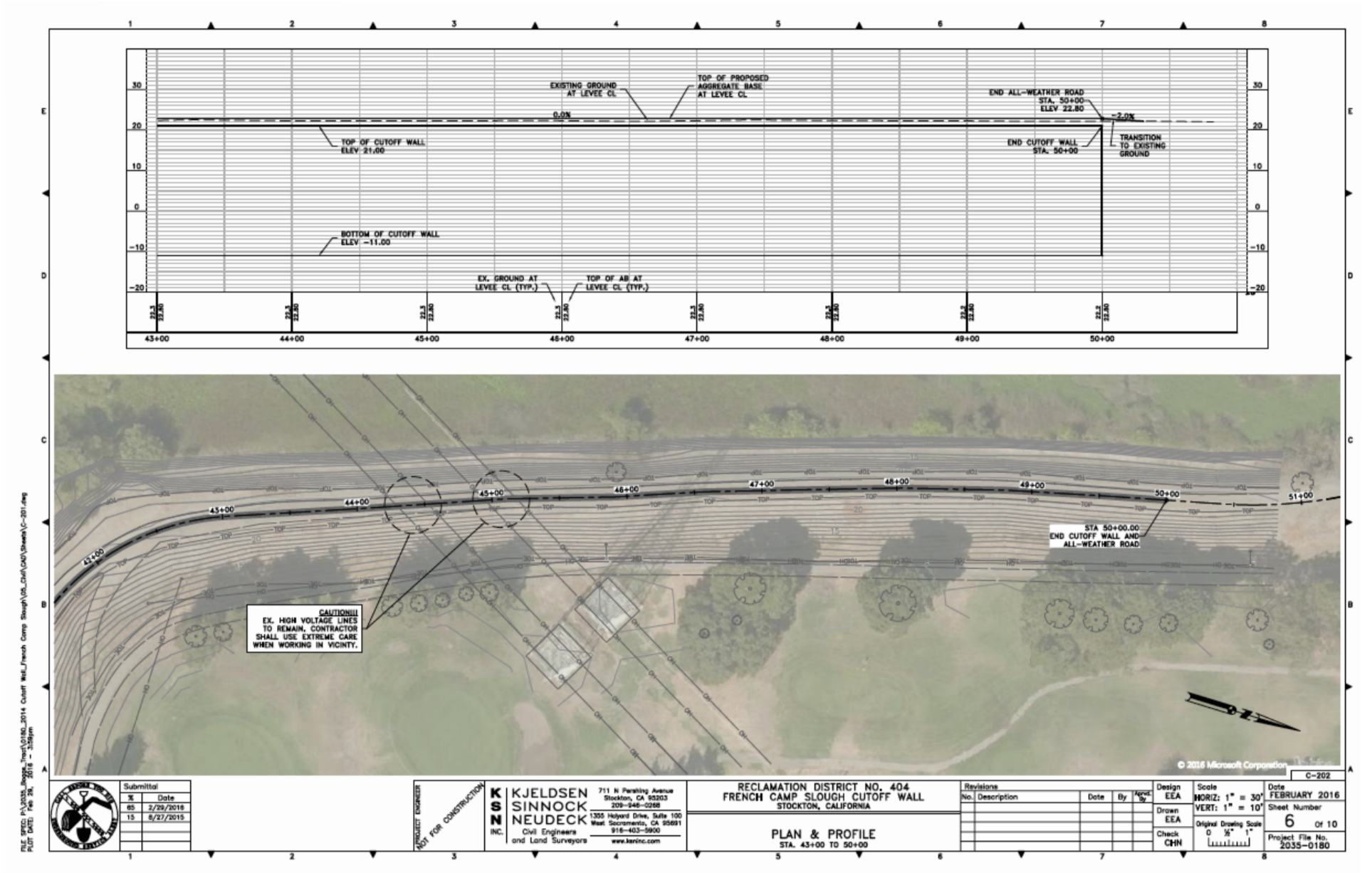


Figure 2-1
FRENCH CAMP SLOUGH CUTOFF WALL, NORTH SECTION

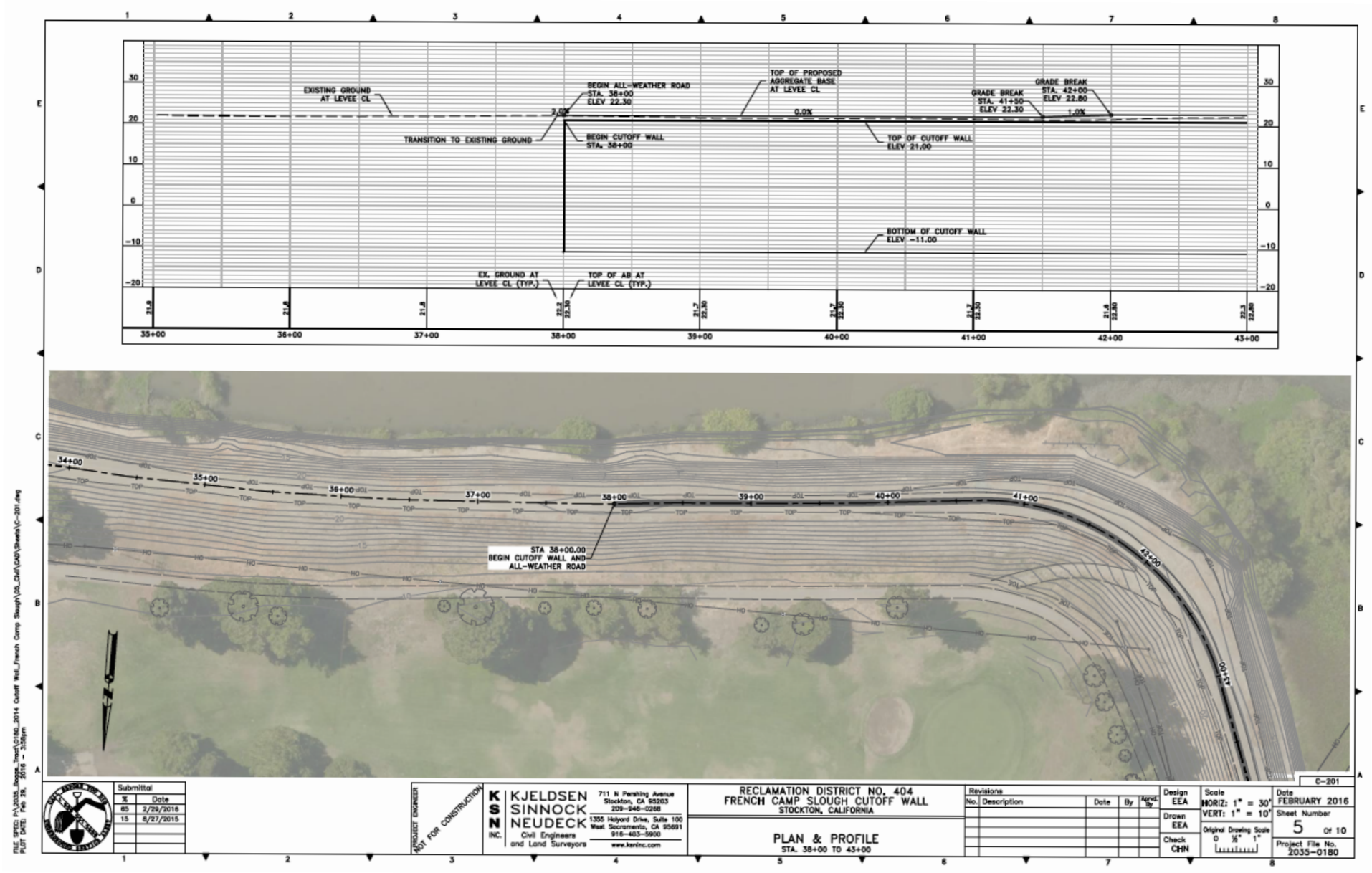
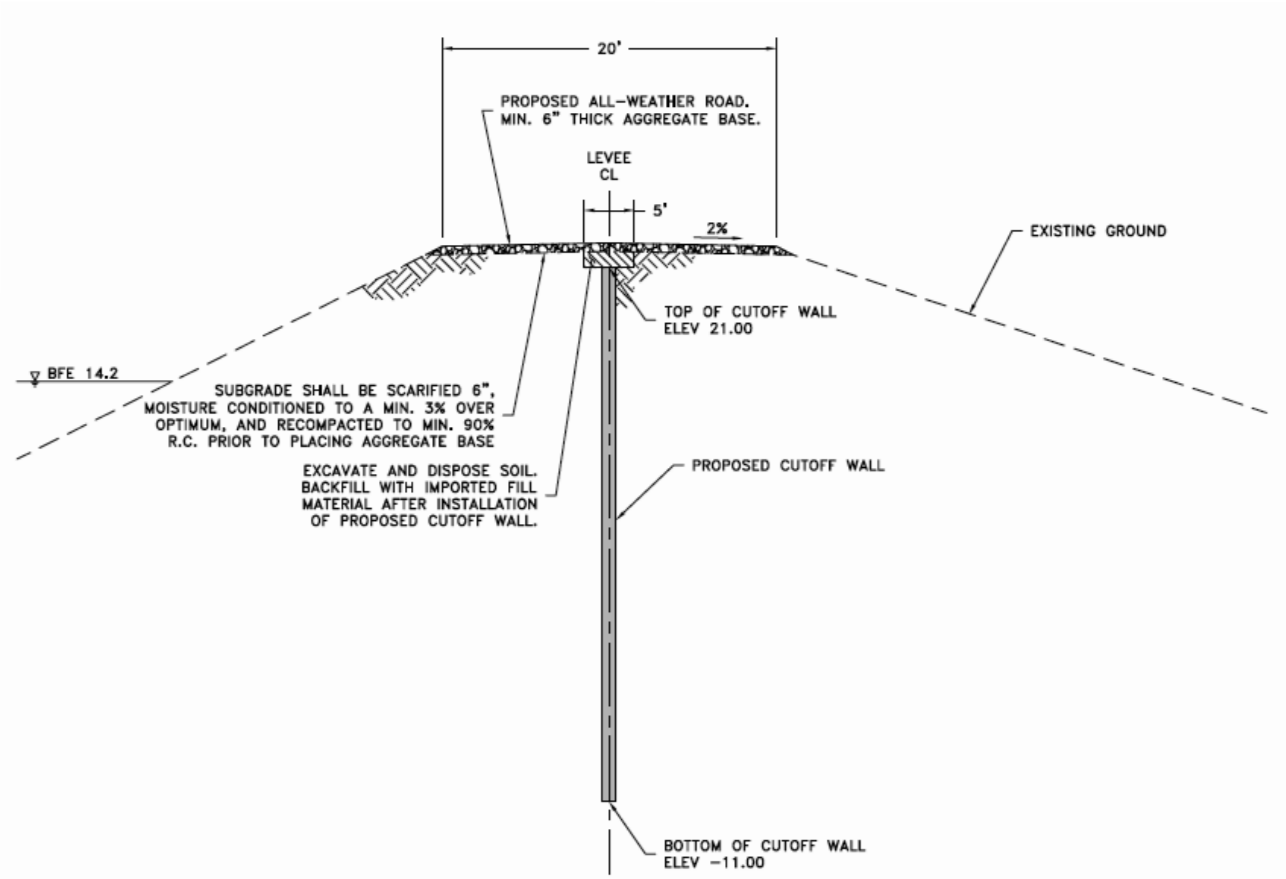


Figure 2-2
FRENCH CAMP SLOUGH CUTOFF WALL, SOUTH SECTION



NOTES:

1. THE PROPOSED CUTOFF WALL SHALL BE CONSTRUCTED ACCORDING TO ONE OF THE FOLLOWING THREE METHODS:
   - POLYVINYL CHLORIDE SHEET PILING
   - DEEP SOIL MIXING
2. THE SAME CUTOFF WALL METHODOLOGY SHALL BE UTILIZED THROUGHOUT THE ENTIRE PROJECT.

Figure 2-3
CUTOFF WALL, TYPICAL SECTION

3.0 ENVIRONMENTAL CHECKLIST FORM

3.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				√
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				√
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			√	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			√	

NARRATIVE DISCUSSION

Environmental Setting

The project site is within Boggs Tract in southwestern Stockton, an mixed urban area containing residences and industrial development (see Section 3.10, Land Use and Planning). French Camp Slough is the main natural feature in the vicinity. Trees, shrubs and other riparian vegetation are found along the river, but views of this riparian area are obstructed by a levee along the north bank. Adjacent to the project site is the Van Buskirk Municipal Golf Course, a landscaped area of course turf and trees.

From Stockton, views of the Coast Ranges and Mount Diablo to the west and the Sierra Nevada to the east constitute the major scenic vistas, when visibility conditions permit. These vistas are mostly obstructed in the project vicinity by existing development. San Joaquin County has designated 26 local roadways within the County as scenic routes (San Joaquin County 2016). None of these local scenic routes are in the vicinity. No State scenic highways have been designated in the vicinity (Caltrans 2015). There are no lights at the project site, and the earthen levee contains nothing that would produce glare.

Environmental Impacts and Mitigation Measures

a) Scenic Vistas.

The project would not alter existing access to views of the Coast Ranges and Sierra Nevada, which are mostly obstructed in the area due to existing development. The project would have no impact on scenic vistas.

b) Scenic Resources.

There are no scenic highways in the vicinity. French Camp Slough and the Van Buskirk Municipal Golf Course are the main scenic resources. Project work would be confined to the levee top, so the slough and the golf course would not be affected. The project would have no impact on scenic resources.

c) Visual Character and Quality.

The project would involve temporary effects on visual character along the levee segment resulting from construction activities. Views of construction activities would be limited to patrons of the golf course. Construction equipment would be removed once work is completed, and the project site would be regraded and returned generally to the same visual condition prior to construction. Visual character impacts are considered less than significant.

d) Light and Glare.

The project would not involve any new lighting or structures with reflective materials or coatings. Construction work that occurs during evening hours would require lighting. Given the distance of the project site from nearby residences and the intervening golf course, any lighting during the evening would be unlikely to disturb residences. Project impacts related to light or glare are considered less than significant.

3.2 AGRICULTURE AND FORESTRY RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				√
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				√
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?				√
d) Result in the loss of forest land or conversion of forest land to non-forest use?				√
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				√

NARRATIVE DISCUSSION

Environmental Setting

RD 404 was originally established to reclaim land for agricultural use. Today, RD 404 consists of mostly urban development, with some natural lands along French Camp Slough. No agricultural fields are in the vicinity of the project site. There are no forest lands on the project site designated by San Joaquin County or other State or federal agencies. Because of this, forestry resources will not be discussed further in this document.

The Important Farmland Maps, prepared by the California Department of Conservation as part of the Farmland Mapping and Monitoring Program, designate the viability of lands for farmland use, based on the physical and chemical properties of the soils. The maps categorize farmland, in decreasing order of soil quality, as "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland." Collectively, these categories are referred to as “Farmland” in the Environmental Checklist in CEQA Guidelines Appendix G. There are also designations for grazing land and for urban/built-up areas, among others. According to the 2014 Important Farmland Map of San Joaquin County, the project site and the water side of the levee is classified as Nonagricultural and Natural Vegetation. The land side of the levee is classified as Urban and Built-Up Land (FMMP 2014).

Environmental Impacts and Mitigation Measures

a) Agricultural Land Conversion.

The project site and vicinity are in a predominantly urbanized area. Neither the project site nor the adjacent area is on lands classified as Farmland, as defined above. The project would have no impact on conversion of Farmland to nonagricultural use.

b) Zoning and Williamson Act.

Neither the project site nor the adjacent area is zoned for agricultural use. The Williamson Act is State legislation that seeks to preserve farmland by offering property tax breaks to farmers who sign a contract pledging to keep their land in agricultural use. Since there is no farmland in the area, no lands are subject to a Williamson Act contract. The project would have no impact on these issues.

c, d) Forest Land Conversion and Zoning.

There is no forest land on the project site or in the vicinity. The project would have no impact on forest lands.

e) Indirect Conversion of Farmland and Forest Land.

As there are no farmlands or forest lands in the area, the project would not contribute indirectly to conversion of these lands. The project would have no impact on this issue.

3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable Air Quality Attainment Plan?				√
b) Violate any air quality standard or contribute to an existing or projected air quality violation?			√	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				√
d) Expose sensitive receptors to substantial pollutant concentrations?			√	
e) Create objectionable odors affecting a substantial number of people?				√

NARRATIVE DISCUSSION

Environmental Setting

The project site is located within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over most air quality matters in the Air Basin. The SJVAPCD is tasked with implementing programs and regulations required by the federal and California Clean Air Acts. Under their respective Clean Air Acts, both the federal government and the State of California have established ambient air quality standards for six criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead. California has four additional pollutants for which it has established standards.

Table 3-1 lists the compliance status of the San Joaquin Valley Air Basin with these ambient air quality standards. As indicated in Table 3-1, the Air Basin is considered a non-attainment area for ozone, particulate matter less than 10 micrometers in diameter (PM10), and particulate matter less than 2.5 micrometers in diameter (PM2.5) under both State and federal standards, except for the federal standard for PM10. The Air Basin is in attainment of, or unclassified for, all other federal and state criteria pollutant standards.

In addition to the criteria pollutants, the California Air Resources Board (ARB) has also identified other air pollutants as toxic air contaminants (TACs) - pollutants that are carcinogenic (i.e., cause cancer) or that may cause other adverse short-term or long-term health effects. Diesel particulate matter, considered a carcinogen, is the most common TAC, as it is a product of combustion in diesel engines. Other TACs are less common and are typically associated with industrial activities.

TABLE 3-1
SAN JOAQUIN VALLEY AIR BASIN ATTAINMENT STATUS

	Designation/Classification	
Criteria Pollutant	**Federal Primary Standards**	**State Standards**
Ozone - One hour	No Federal Standard	Nonattainment/Severe
Ozone - Eight hour	Nonattainment/Extreme	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NO_x)	Attainment/Unclassified	Attainment
Sulfur Dioxide (SO_x)	Attainment/Unclassified	Attainment
Lead	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

Source: SJVAPCD 2015a.

As previously noted, the SJVAPCD has jurisdiction over most air quality matters in the Air Basin. It implements the federal and California Clean Air Acts, and the applicable attainment and maintenance plans, through local regulations. Applicable attainment plans include the 2007 Ozone Plan, the 2013 Plan for the Revoked 1-Hour Ozone Standard for the Air Basin, the 2015 $PM_{2.5}$ Plan for the 1997 federal $PM_{2.5}$ standard, the 2012 $PM_{2.5}$ Plan for the 2006 federal $PM_{2.5}$ standard, the 2016 Moderate Area Plan for the 2012 federal $PM_{2.5}$ standard, and the 2007 PM_{10} Maintenance Plan to maintain the Air Basin's attainment status of federal PM_{10} standards.

The SJVAPCD regulations that would be applicable to the project are summarized below.

Regulation VIII (Fugitive Dust PM_{10} Prohibitions)

Rules 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and track out, landfill operations, etc.

Rule 4101 (Visible Emissions)

This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.

In 2015, the SJVAPCD adopted a revised Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI). The GAMAQI defines methodology and thresholds of significance for the assessment of air quality impacts for projects within SJVAPCD's jurisdiction, along with mitigation measures for identified impacts. Table 3-2 shows the CEQA thresholds for significance for pollutant emissions within the SJVAPCD.

Construction of the proposed project would involve the use of heavy equipment powered by diesel or other internal combustion engines. The Road Construction Emissions Model (RCEM) was used to estimate the pollutant emissions that would result from such equipment use. Although developed for road projects, the RCEM is a useful model to estimate emissions for projects that are linear in character. A construction period of three months was assumed. The RCEM results are shown in Appendix A of this document and in Table 3-2 below. The results are considered conservative, as the construction equipment assumed for use may be more than would actually be used for project construction.

TABLE 3-2
PROJECT CONSTRUCTION AIR POLLUTANT EMISSIONS

Pollutant	SJVAPCD Significance Threshold (tons per year)	Construction Emissions[1]	Exceeds Threshold?
CO	100	0.7	No
NOx	10	1.2	No
ROG	10	0.1	No
PM_{10}	15	0.1	No
$PM_{2.5}$	15	0.1	No

[1] Tons per construction period (3 months).
Sources: Road Construction Emissions Model v. 7.1.5.1; SJVAPCD 2015b.

a) Air Quality Plan Consistency.

The levee would not generate any air pollutant emissions once construction work is completed, other than emissions from occasional visits by maintenance vehicles, the emissions of which are considered minimal. The project would have no impact regarding consistency with applicable air quality plans.

b) Violation of Air Quality Standards.

As indicated in Table 3-2 above, estimated project construction air emissions would be substantially below the applicable significance thresholds adopted by the SJVAPCD. The project would not involve any operational emissions.

Project construction may generate localized dust emissions at levels above existing ambient conditions. While there are no residences or other sensitive receptors in the vicinity, dust emissions could disturb patrons of the golf course, diminishing the recreational experience. Dust

emissions would be reduced through implementation of SJVAPCD Regulation VIII, which contains the following dust emission control measures:

- Air emissions related to the project shall be limited to 20% opacity (opaqueness, lack of transparency) or less, as defined in SJVAPCD Rule 8011. The dust control measures specified below shall be applied as required to maintain the Visible Dust Emissions standard.

- The contractor shall pre-water all land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and phase earthmoving.

- The contractor shall apply water, chemical/organic stabilizer/suppressant, or vegetative ground cover to all disturbed areas, including unpaved roads, throughout the period of soil disturbance.

- The contractor shall restrict vehicular access to the disturbance area during periods of inactivity.

- The contractor shall apply water or chemical/organic stabilizers/suppressants, construct wind barriers and/or cover exposed potentially dust-generating materials.

- When materials are transported off-site, the contractor shall stabilize and cover all materials to be transported and maintain six inches of freeboard space from the top of the container.

- The contractor shall remove carryout and trackout of soil materials on a daily basis unless it extends more than 50 feet from site; carryout and trackout extending more than 50 feet from the site shall be removed immediately. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden. If the project would involve more than 150 construction vehicle trips per day onto the public street, additional restrictions specified in Section 5.8 of SJVAPCD Rule 8041 would apply.

With implementation of the provisions of SJVAPCD Regulation VIII, project construction emissions would be less than significant.

c) Cumulative Emissions.

The levee would not generate any pollutant emissions after completion of construction work. The project would have no impact on cumulative air pollutant emissions.

d) Exposure of Sensitive Receptors.

There are no sensitive receptors adjacent to the project site, and project operations would not generate any emissions. Project construction emissions, including diesel particulate matter (a TAC), may affect the adjacent golf course, but these emissions would only have adverse effects if they were generated in the long term, and these emissions would cease once construction work is completed. Project impacts are considered less than significant.

e) Odors.

The project does not involve any features that would generate noticeable odors during either construction or operation. The project would have no impact related to odors.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Adversely impact, either directly or through habitat modifications, any endangered, rare, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?		√		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?				√
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			√	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		√		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				√
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?			√	

NARRATIVE DISCUSSION

Information in this section is primarily based upon a biological assessment of the project site prepared in 2017 by Moore Biological Consultants. The assessment involved a field survey and a review of databases, aerial photographs, and documents. Databases searched included the California Natural Diversity Database (CNDDB), and documents reviewed included the IPac Trust Report of Federally Threatened and Endangered Species provided by the U.S. Fish and Wildlife Service (USFWS). Appendix B contains the biological assessment for the project.

Environmental Setting

Existing Biological Conditions

There is no vegetation along the gravel road on top of the levee and very little vegetation along the top edges of the levee slopes where construction work would occur. The lower portion of the waterside slope of the levee adjacent to the site is covered with some rock slope protection and supports a sparse and discontinuous fringe of riparian trees and shrubs. The upper levee slopes either lack vegetation or are sparsely vegetated with ruderal grasses and weeds; the levee slopes are also periodically sprayed as part of RD 404's ongoing levee maintenance program.

California annual grassland series best describes the type of vegetation along the landside levee slope. Grasses including oats, ripgut brome, perennial ryegrass, and foxtail barley are dominant grass species. Other grassland species, such as black mustard, common mallow, and filaree, are intermixed with the grasses. Below the elevation of high tide, French Camp Slough supports tules and cattails, which are sparse or entirely absent adjacent to the east end of the site and expansive and dense further northwest.

There are a few trees along the waterside levee slope adjacent to where the work would occur, including valley oak, coast live oak, box elder, Fremont cottonwood, and willows. There are some widely spaced patches of Himalayan blackberry, willows, and wild rose along the waterside of the levee. None of this riparian forest and/or scrub-shrub vegetation falls within the proposed work area. There are pines, redwoods, and other ornamental trees on the golf course. None of the golf course trees fall within the work area. No blue elderberry shrubs, which is habitat for the listed valley elderberry longhorn beetle, were observed at or near the project site.

A variety of bird species were observed during the recent survey. Turkey vulture, great egret, great blue heron, black-crowned night-heron, Canada goose, Swainson's hawk, red-tailed hawk, American kestrel, American crow, western kingbird, mourning dove, Brewer's blackbird, and red-winged blackbird are representative bird species observed at and near the project site. There are trees along French Camp Slough and surrounding areas that are suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. Swainson's hawks were observed soaring over the site during the survey and are likely nesting in the area. Given the presence of riparian habitats as well as ornamental trees in and near the site, it is likely one or several pairs of raptors and a variety of songbirds nest in and/or near the site during most years. The scrub-shrub and emergent wetland vegetation within and along French Camp Slough provides high-quality nesting habitat for numerous birds. It is possible that ground-nesting songbirds, such as killdeer and red-winged blackbird, nest in the grassland habitats in the site.

A variety of mammals common to riparian and urban areas likely occur in the project site. California ground squirrel was observed during the recent survey; species such as black-tailed hare, desert cottontail, Virginia opossum, and raccoon are expected to occur. Based on habitat types present, a limited number of amphibians and reptiles may use habitats in the area. A Pacific pond turtle was observed in a golf course pond just north of the site during the recent survey; a western fence lizard was observed along the levee.

Waters of the U.S.

Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. As defined in 33 CFR 328.4, Waters of the U.S. encompass Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and intrastate rivers and streams, as well as their

tributaries. They also include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

State and federal agencies regulate Waters of the U.S. and wetlands. Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including wetlands. The U.S. Army Corps of Engineers (USACE) issues Section 404 permits. In tidal waters, the limit of federal jurisdiction is high tide. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the "ordinary high water mark," which is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris. The California Department of Fish and Wildlife (CDFW) has jurisdiction over modifications to rivers, lakes, and streams under Section 1600 of Fish and Game Code of California. The California Regional Water Quality Control Board (RWQCB) issues Water Quality Certifications or waivers in association with the issuance of Section 404 permits.

French Camp Slough is a jurisdictional Water of the U.S. subject to Section 404 of the Clean Water Act. The limit of federal jurisdiction is high tide, which is a few feet above mean sea level. This waterway also falls under the jurisdiction of CDFW, RWQCB, and the Central Valley Flood Protection Board (CVFPB). Beyond French Camp Slough, no other potentially jurisdictional wetlands or Waters of the U.S. were observed on or adjacent to the project site. There is a pond in the golf course just northeast of the north end of the project site. This pond may be a historical oxbow associated with French Camp Slough, but it is now separated by the levee and is a managed water feature. Despite its managed nature, the pond may be viewed as a jurisdictional Water of the U.S. by ACOE.

Special-Status Species

Special-status species includes plant and/or wildlife species that are in one or more of the following categories:

- Legally protected under the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), or other regulations.
- Designated rare, threatened, or endangered and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS).
- Considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat.
- Considered rare or endangered under the conditions of CEQA Guidelines Section 15380, such as species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS), and species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 2 of the biological assessment (see Appendix B) provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the project area.

This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

Biological Resource Plans

The project site is located within the coverage area of the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP), which is administered by SJCOG. The SJMSCP implements a program that assesses a habitat conservation fee on open space land that is converted to urban uses. The fees are used for habitat acquisition and improvement programs. The SJMSCP also sets forth Incidental Take Minimization Measures (ITMMs) that projects must implement to prevent impacts to special-status species that may be occupying the site or nearby areas. ITMMs have been developed for specific species, such as Swainson's hawk and burrowing owl (SJCOG 2000).

RD 404 is not a participating agency in the SJMSCP; participation in the SJMSCP process would be voluntary for RD 404. Should RD 404 choose to not participate, then mitigation measures described below would be implemented to avoid or minimize impacts on biological resources.

Environmental Impacts and Mitigation Measures

a) Effects on Special-Status Species.

Based on the ongoing levels of disturbance from development, levee maintenance, and fire suppression, it is unlikely that most of the listed, candidate, or other special-status species in Table 2 of the biological assessment (see Appendix B) would occur on the project site. Most of the special-status plant species listed in Table 2 occur in marshes and swamps or riparian woodlands. These species may occur in French Camp Slough below the water line, but they would not occur in upland habitats on the levee crown and upper levee slopes where the proposed levee improvements would be constructed. Other special-status plant species occur in habitats that are not present at the project site or the soil disposal area, such as vernal pools, riparian scrub, and undisturbed valley grassland. The highly disturbed upland grassland on the levee slopes is routinely sprayed and does not provide suitable habitat for special-status plants.

The potential for intensive use of habitats within the work areas by special-status wildlife species listed in Table 2 also is considered generally low. However, Swainson's hawk, a species listed as threatened under CESA, has been observed in the area, and the potential occurrence of this species is considered "high." Bird species such as Swainson's hawk, burrowing owl, tricolored blackbird, white-tailed kite, least Bell's vireo, and other species protected by the Migratory Bird Treaty Act could potentially establish nests near the project site. Construction activities could disturb nesting behaviors of these birds, which would be a significant impact. Trees and shrubs within the work area could be used by other birds protected by the Migratory Bird Treaty Act of 1918. The grasslands may be used by ground-nesting species.

As mentioned above, Pacific pond turtle was observed at a golf course pond just north of the project site during the survey. Pond turtles could potentially occur in French Camp Slough and could potentially nest in grasslands in or near the site. While French Camp Slough provides potentially suitable aquatic habitat for giant garter snake, the levee crown and upper levee slopes do not provide suitable habitat for this species. Giant garter snake is has also not been documented in French Camp Slough or in other waterways near the site and is not known to occur in this part of the Sacramento-San Joaquin Delta. The project site does not provide suitable habitat for the other special-status wildlife species in Table 2.

The project site is designated critical habitat for Delta smelt. Delta smelt critical habitat includes entire Delta islands and the waterways where this fish actually occurs. Work on upland portions of the levee should have no effect on off-site waterways and no effect on the suitability of Delta waterways for Delta smelt. The project site is not within designated critical habitat of Central Valley steelhead or any other federally listed species.

RD 404 could mitigate potential impacts by participating in the SJMSCP, including the implementation of applicable ITMMs for special-status species. Participation in the SJMSCP would reduce potential impacts on special-status species to a level that would be less than significant. However, if RD 404 decides to not participate in the SJMSCP, then the following mitigation measures shall be implemented to reduce impacts on special-status species in the area.

Level of Significance: Potentially significant

Mitigation Measures: If the Reclamation District decides to not participate in the SJMSCP, then the following mitigation measures shall be implemented:

BIO-1: In order to avoid take of protected raptors and migratory birds between February 1 and August 31, an initial pre-construction nest survey shall be conducted by a CDFW-approved biologist. The survey shall be conducted within 15 days prior to the beginning of construction activities in order to identify active nests within 500 feet of the project work areas, and active raptor nests within one-quarter mile (1,320 feet) of the project work areas. The surveys shall incorporate methodologies from CDFW's 1994 Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California and the 2000 Swainson's Hawk Technical Advisory Committee survey guidelines.

If active raptor nests are found within 1,320 feet of the work area, or other active nests within 500 feet of the work area, a temporary buffer of 1,320 feet and 500 feet, respectively, shall be established and an on-site biologist/monitor experienced with raptor behavior shall be retained by RD 404. The biologist shall monitor the nest(s) and consult with the CDFW to determine the buffers to be applied and best course of action to avoid nest abandonment or take of individuals. The necessity and extent for temporal construction restrictions shall be determined by CDFW. CDFW may determine it is necessary for a designated biologist/monitor to be on-site daily while construction-related activities are within or near buffer areas. The on-site biologist/monitor shall have authority to stop work if raptors are exhibiting agitated behavior such as defensive flights at intruders, unusual getting up from a brooding position or unusual flying off the nest. If, during the nesting season, there is a lapse in project-related work of 15 days or longer, another focused survey shall be performed and the results sent to CDFW prior to resuming work.

BIO-2: Preconstruction surveys for burrowing owl shall be undertaken for construction activities between February 1 and August 31. The surveys shall incorporate methodologies from CDFW's 2012 Staff Report on Burrowing Owl Mitigation and the 1993 California Burrowing Owl Consortium Burrowing Owl Survey Protocol and Mitigation Guidelines. In the event that nesting owls are located within 250 feet of the work areas, temporal construction restrictions may be necessary to eliminate the potential for noise

disturbance to the burrowing owls. The necessity and extent for temporal construction restrictions as to nesting burrowing owls is dependent upon location of the nest with respect to construction and shall be determined by CDFW as described above.

BIO-3: Any vegetation removal during the avian nesting season (February 1 through August 31) shall be immediately preceded by a survey. If active nests are found, adequate marking of the nest site shall be provided and vegetation removal in the vicinity of the nest shall be delayed until the young fledge. No further mitigation shall be implemented if no active bird nests are found. For construction in the non-nesting season (September 1 through January 31), RD 404 shall consult with CDFW regarding the appropriate pre-construction surveys, and avoidance and minimization measures.

BIO-4: If a Pacific pond turtle is observed, it should be left alone to move out of the area on its own or may be relocated by a qualified biologist to a suitable aquatic habitat outside of the work area. RD 404 shall exercise measures to avoid direct injury to Pacific pond turtle, as well as measures to avoid areas where they are observed to occur. Pre-construction surveys for Pacific pond turtle and their nests, which will involve a search for nests in uplands on the landside of the levees, will be conducted prior to construction work between April 1 and October 31. If nest sites are located, RD 404 will notify CDFW and a 50-foot buffer area around the nest shall be staked and work will be delayed until hatching is complete and the young have left the nest site.

BIO-5: A biological worker awareness training program shall be implemented to educate the construction crews of the biological diversity within the project area. The worker awareness program shall include a presentation on the life history and legal status of potentially occurring special-status species and distribution of informational packages to each worker. While all of the species in Table 2 of the biological assessment (see Appendix B of this IS/MND) will be at least briefly addressed, the focal species of the worker awareness training program will be Swainson's hawk, burrowing owl, and Pacific pond turtle. A copy of the District's Biological Avoidance and Minimization Measures will be kept on site for reference for the duration of the project.

Significance After Mitigation: Less than significant

b) Riparian and Other Sensitive Habitats.

As previously noted, there are a few trees along the waterside levee slope adjacent to where the work would occur, along with patches of Himalayan blackberry, willows, and wild rose. None of this riparian forest and/or scrub-shrub vegetation falls within the proposed work area. There are pines, redwoods, and other ornamental trees on the golf course, none of which fall within the work area. No blue elderberry shrubs, which is habitat for the listed valley elderberry longhorn beetle, were observed at or near the project site. The project would have no impact on riparian and other sensitive habitat.

c) Wetlands and Waters of the U.S.

Project work would be confined to the existing levee footprint and to the levee crown. No levee work would occur within the high tide level of French Camp Slough, which marks the jurisdictional boundary for Waters of the U.S. subject to the Section 404 permit process. There will be no project work on or near the golf course pond in the vicinity of the project site. Since the project would not affect any potential Waters of the U.S. in the vicinity, project impacts would be less than significant.

d) Fish and Wildlife Movement.

Project work would be confined to the existing levee footprint. The work would not affect French Camp Slough, which is a potential migratory corridor for fish species such as Chinook salmon and green sturgeon. As described in a) above, migratory bird species protected under the Migratory Bird Treaty Act could be affected by project construction work. Implementation of Mitigation Measures BIO-1 and BIO-3 would reduce potential impacts on migratory birds to a level that would be less than significant.

e) Local Biological Requirements.

RD 404 has no policies or ordinances applicable to biological resources. Project work would be confined to the existing levee footprint, which means that no vegetation communities or other biological resources would be affected. The project would have no impact on this issue.

f) Conflict with Habitat Conservation Plans.

The project may choose to obtain coverage under the SJMSCP. With participation in the SJMSCP, the project would not conflict with applicable habitat conservation plans. However, if RD 404 chooses not to participate in the SJMSCP, then it would implement the mitigation measures described in this section that are designed to avoid or minimize impacts on species that would otherwise be covered by the SJMSCP. Project impacts are considered less than significant.

3.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				√
b) Cause a substantial adverse change in the significance of a unique archaeological resource (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person)?		√		

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		√		
d) Disturb any human remains, including those interred outside of formal cemeteries?			√	

NARRATIVE DISCUSSION

Environmental Setting

Except where noted, information in this section is primarily based upon an archaeological inventory survey of the project area prepared in 2017 by Genesis Society. The survey involved a search for records of historical and prehistorical resources through the Central California Information Center at CSU Stanislaus, contact with the Native American Heritage Commission and tribes with a potential interest, and a field survey of the project area. Appendix C contains the cultural resource report for the project.

Prehistoric Resources

The project site is located within territory claimed by the Northern Valley Yokuts. The Yokuts occupied an extensive area, from the Coast Ranges to the Sierra Nevada foothills, and from the American River to the upper San Joaquin River. Yokut villages typically consisted of a scattering of small structures, numbering from four or five to several dozen in larger villages, and were often located on flats adjoining streams. These villages were inhabited mainly in the winter, because it was necessary to go into the hills and higher elevation zones to establish temporary camps during food-gathering seasons. As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing, and collecting plants, with deer, acorns and avian and aquatic resources representing primary staples. The Yokuts used a wide variety of wooden, bone, and stone artifacts to collect and process their food, and they used local resources to manufacture an array of primary and secondary tools and implements. Only fragmentary evidence of their material culture remains, due in part to perishability and in part to impacts to archaeological sites resulting from later land uses.

Historic-Era Resources

Historically, this part of the Central Valley was first visited by Anglo-American fur trappers, Russian scientists and Spanish-Mexican expeditions during the first half of the 19th century. By the late 1830s and early 1840s, small permanent European-American settlements had settled in the Central Valley and surrounding foothills. The discovery of gold in the Sierra Nevada in 1848 triggered a massive influx of people. Demand for commodities from the mining communities led quickly to the expansion of ranching and agriculture throughout the Central Valley, followed by permanent communities along major transportation corridors. The Southern Pacific and Central Pacific Railroads and a host of smaller interurban lines began intensive projects in the late 1860s, eventually connecting Stockton with other cities.

French Camp, a community located southwest of the project site, is one of the first permanent settlements in the Stockton area. It was first occupied in 1832 by employees of the Hudson's Bay Company. In 1841, Charles Weber arrived in California and subsequently settled on a point of land in present-day downtown Stockton. In 1844, Weber and others received a tract of land called

Rancho del Campo de los Franceses. The project site is located within the boundaries of this land grant.

Land reclamation in California can be traced to the Swamp Land Act of 1850, federal legislation that authorized the transfer of federal swamplands to private ownership provided that the swamplands be drained and made productive. Owners of reclaimed land were authorized to organize special districts to acquire, build, and operate reclamation works. RD 404, also known as Boggs Tract, was established in 1881 (Angermeier 1970). Originally established for agriculture, RD 404 now contains substantial urban development, primarily residential and industrial (RD 404 2015).

Paleontological Resources

Remains of extinct animals, such as mammoth, could be found virtually anywhere in the county, especially along watercourses such as the San Joaquin River and its tributaries. The vast majority of paleontological specimens from San Joaquin County have been found in rock formations in the foothills of the Diablo Mountain Range (San Joaquin County 2016). Geological materials underlying the project area include the recent (Quaternary) sedimentary deposits of the Modesto Formation (Wagner et al. 1991). Numerous vertebrate fossil sites have been associated with the Modesto Formation in the Central Valley, including land mammals, birds, reptiles, and amphibians (California High Speed Rail Authority 2012). The project site itself does not contain any known paleontological resources or unique geological features.

Environmental Impacts and Mitigation Measures

a) Historical Resources.

The search through the Central California Information Center did not reveal any recorded historical resources on the project site, and only one historical resource recorded within one-quarter mile of the site. The resource, a PG&E utility transmission line, is outside the project site. The field survey did not find evidence of historical resources. The archaeological survey concluded that no significant historical resources or properties are present on the project site. The project would have no impact on historical resources.

b) Archaeological Resources.

The search through the Central California Information Center did not reveal any recorded archaeological resources on the project site and only one archaeological resource recorded within one-quarter mile of the site. The resource, a prehistoric burial, was severely disturbed by levee construction. The field survey found no evidence of prehistoric activity or occupation. The survey mentioned that the absence of archaeological resources may be explained partially by the location of the project area in a flood zone, which Native American populations would have avoided, and partially by the subsequent disturbance of the project area by levee construction and maintenance.

Given the disturbance of the project vicinity by levee construction and adjacent urban development, it is considered unlikely that any archaeological resources would be encountered. Since locations near rivers have been known to yield such resources, it is conceivable that project construction activities could unearth archaeological materials of significance. The establishment of procedures to address archaeological discoveries, if they should occur, would reduce potential impacts to a level that would be less than significant. These procedures are set forth in the following mitigation measure.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: If any subsurface cultural or paleontological resources are encountered during construction of the project, all construction activities within 100 feet of the find shall be halted until a qualified archaeologist or paleontologist, as appropriate, can examine these materials, make a determination of their significance and, if significant, recommend further mitigation measures that would reduce potential effects to a level that is less than significant. Such measures could include 1) preservation in place or 2) excavation, recovery and curation by qualified professionals. RD 404 shall be responsible for retaining qualified professionals, implementing recommended mitigation measures and documenting mitigation efforts in a written report, consistent with the requirements of the CEQA Guidelines.

Significance After Mitigation: Less than significant

c) Paleontological Resources.

The project site is not in a location where paleontological materials could be expected, given past disturbance. Given the underlying Modesto Formation at the site, it is conceivable that excavation associated with the project could unearth paleontological materials of significance. The establishment of procedures to address paleontological discoveries if they should occur would reduce any potential impacts to a level that would be less than significant. These procedures are set forth in Mitigation Measure CULT-1 above.

d) Human Burials.

It is not expected that the project would uncover any human burials, particularly Native American burials, given past disturbance. Yet, it is conceivable that excavation associated with the project could uncover a previously unknown burial.

CEQA Guidelines Section 15064.5(e) describes the procedure to be followed when human remains are uncovered in a location outside a dedicated cemetery. All work in the vicinity of the find shall be halted and the County Coroner shall be notified to determine if an investigation of the death is required. If the County Coroner determines that the remains are Native American in origin, then the County Coroner must contact the Native American Heritage Commission within 24 hours. The Native American Heritage Commission shall identify the most likely descendants of the deceased Native American, and the most likely descendants may make recommendations on the disposition of the remains and any associated grave goods with appropriate dignity. If a most likely descendant cannot be identified, the descendant fails to make a recommendation, or the landowner rejects the recommendations of the most likely descendant, then the landowner shall rebury the remains and associated grave goods with appropriate dignity on the property in a location not subject to further disturbance.

Compliance with the provisions of CEQA Guidelines Section 15064.5(e) would ensure that impacts on any human remains encountered during project construction would be less than significant.

3.6 GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				√
ii) Strong seismic ground shaking?			√	
iii) Seismic-related ground failure, including liquefaction?			√	
iv) Landslides?				√
b) Result in substantial soil erosion or the loss of topsoil?			√	
c) Be located on strata or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			√	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?			√	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				√

NARRATIVE DISCUSSION

Environmental Setting

Soil Characteristics

The project site is located within the alluvial Great Valley geomorphic province, also known as the Central Valley, which is a sediment-filled trough approximately 450 miles long and 50 miles wide that is flanked on the east and west by the Sierra Nevada and Coast Ranges, respectively. Sediment deposits within the Central Valley may exceed 30,000 feet in thickness; older marine sedimentary deposits are typically overlain by more recent continental sediments. As noted in Section 3.5, Cultural Resources, the underlying geology at the project site is the Modesto Formation, which consists of geologically recent sedimentary deposits.

The RD 404 levees are generally underlain by late Pleistocene alluvial fan sediments, which in turn are overlain by Holocene alluvium and basin deposits of the San Joaquin River. A cross section of the segment of levee that is within the project site consist of 10-15 feet of levee embankment consisting primarily of "lean" clay (i.e., clay that has low to medium plasticity). Below the embankment is a fine-grained foundation soil layer that is approximately 25 feet deep. This layer generally consists of lean and sandy clay, with occasional discontinuous layers of silty sand and poorly graded sand with silt. Below this foundation layer is a pervious drainage layer 8 to 12 feet deep, and below this layer are interbedded layers of lean clay, silt to silty sand, and poorly graded sand ranging in thickness from 3 to 10 feet (ENGEO 2011).

A custom soil survey of the project site, based upon previous work by the Natural Resource Conservation Service, indicates the project site and the land side of the levee is underlain by Rioblancho-Urban land complex (USDA NRCS 2016). This soil complex is 50 percent Rioblancho clay loam and 35 percent urban land. The Rioblancho soil is moderately deep to hardpan and is poorly drained. Permeability is moderately slow with this soil, and runoff is slow. The hazard for water erosion is slight, while there is no hazard of wind erosion. The "shrink-swell" potential, which is the potential for the soil to expand and contract, ranges from low to moderate. Urban land consists of mostly impervious surfaces, with soil material underlying the surface similar to Rioblancho clay loam (USDA SCS 1992). The water side of the levee is designated Water.

Seismic Characteristics

There are no active or potentially active faults located within or near the project area. No Alquist-Priolo Earthquake Fault Zones, designated by the State Geologist as areas of potential surface fault rupture, are located within the project area (California Geological Survey 2015). San Joaquin County is subject to seismic shaking from fault features located to the east and west of the County, including the Hayward/Rodgers Creek, San Andreas, and Calaveras Faults (San Joaquin County 2016).

Soil compaction and settlement can result from seismic groundshaking. If the sediments which compact during an earthquake are saturated, water from voids is forced to the ground surface, where it emerges in the form of mud spouts or sand boils – a process called liquefaction. Based on known information, areas of the County with groundwater less than 50 feet from ground surface in unconsolidated sediment are susceptible to liquefaction, including levees, wetlands and lands near river courses (San Joaquin County 2016).

Environmental Impacts and Mitigation Measures

a-i) Fault Rupture Hazards.

There are no active or potentially active faults located within or near the project site, nor are there Alquist-Priolo zones. The project would have no impact related to fault rupture.

a-ii, iii) Seismic Hazards.

The project site, along with the rest of the County, is subject to seismic shaking from fault features located to the east and west of the County. This shaking, in turn, could potentially induce uneven soil settlement at the project site and also liquefaction, given the proximity of the site to water.

An evaluation of the RD 404 levees along the north bank of Walker Slough and French Camp Slough, including the project site, was conducted by ENGEO in 2011. The evaluation included analyses of levee slope stability and liquefaction potential. The project site is within a segment of levee that the ENGEO evaluation designated as Sub-Reach 1a. The evaluation concluded that some settlement of soils due to a seismic event could occur in Sub-Reach 1a. However, it was likely that a majority of the settlement has already occurred due to the existing levee weight. Because the proposed project does not generate a net increase in overburden, significant settlement is not anticipated (ENGEO 2011).

An evaluation of potential liquefaction was also conducted. Soils with a liquefaction potential were found in Sub-Reach 1a. They were found in relatively thin and discontinuous soil lenses; as such, a slope stability analysis incorporating a post-liquefaction reduction in shear strength was not performed (ENGEO 2011). An analysis of levee slope stability indicated that Sub-Reach 1a generally meets the current USACE guidance for slope stability and that installation of a cutoff wall would only improve slope stability conditions (ENGEO 2011).

In summary, the project would not affect levee conditions related to seismic hazards such as ground shaking and liquefaction. Project impacts are considered less than significant.

a-4) Landslides.

The project site is in a topographically flat area, so no landslides would occur. The project would have no impact on this issue.

b) Soil Erosion.

The soil underlying the project site is Scribner clay loam, which is a soil with a slight water hazard and a moderate wind erosion hazard. The underlying soil would not be disturbed by project construction activities, other than potentially by the installation of the cutoff wall, which would not involve exposure of the soil. Construction activities may expose soils at the levee top to potential precipitation and wind, which may cause some erosion. Erosion problems would be controlled through compliance with SJVAPCD Regulation VIII, which is described in Section 3.3, Air Quality. Compliance with Regulation VIII would reduce potential soil erosion to a level considered less than significant.

c) Geologic Instability.

The soils underlying the sites where the facilities would be constructed have not been identified as inherently unstable or prone to failure. The existing levee has not had an adverse effect on soil stability identified with it, and the project would not change the levee configuration. The ENGEO geotechnical evaluation did not identify instability issues. Project impacts are considered less than significant.

d) Expansive Soils.

The Rioblancho clay loam has a moderate shrink-swell potential. However, there is no evidence of potential impact on the existing levee, and the cutoff walls would not be affected by this soil. Project impacts related to expansive soils are considered less than significant.

e) Adequacy of Soils for Sewage Disposal.

The project would not use, and does not propose to install, any septic systems. The project would have no impact related to this issue.

3.7 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			√	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			√	

NARRATIVE DISCUSSION

Environmental Setting

Greenhouse gases (GHGs) are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. GHGs are both naturally occurring and are emitted by human activity. GHGs include carbon dioxide (CO_2), the most abundant GHG, as well as methane, nitrous oxide and other gases. GHG emissions in California in 2014 were estimated at 441.5 million metric tons carbon dioxide equivalent (CO_2e) – a decrease of 9.4% from the peak level in 2004. Major GHG sources in California include transportation (36%), industrial (21%), electric power (20%), commercial and residential (9%), and agriculture (8%) (ARB 2016).

Increased atmospheric concentrations of GHGs are considered a main contributor to global climate change, which is a subject of concern for the State of California. Potential impacts of global climate change in California include reduced Sierra Nevada snowpack, increased wildfire hazards, greater number of hot days with associated decreases in air quality, and potential decreases in agricultural production (Climate Action Team 2010).

Unlike the criteria air pollutants described in Section 3.3, Air Quality, GHGs have no "attainment" standards established by the federal or State government. In fact, GHGs are not generally thought of as traditional air pollutants because their impacts are global in nature, while air pollutants mainly affect the general region of their release to the atmosphere (SJVAPCD 2015b). Nevertheless, the U.S. Environmental Protection Agency (EPA) has found that GHG emissions endanger both the public health and public welfare under Section 202(a) of the Clean Air Act due to their impacts associated with climate change (EPA 2009).

The State of California is identifying strategies and implementing GHG emission reduction programs through AB 32, the Global Warming Solutions Act of 2006, which requires total statewide GHG emissions to reach 1990 levels by 2020, or an approximately 29% reduction from 2004 levels. In compliance with AB 32, the State adopted the Climate Change Scoping Plan in 2008, and updated the plan in 2014. Primary strategies addressed in the original Scoping Plan included new industrial and emission control technologies; alternative energy generation technologies; advanced energy conservation in lighting, heating, cooling and ventilation; fuels with reduced carbon content; hybrid and electric vehicles; and methods for improving vehicle mileage (ARB 2008). The 2014 update highlighted California's progress toward meeting the

2020 GHG emission reduction goal and established a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050 (ARB 2014).

In 2016, the State Legislature passed and the Governor signed Senate Bill (SB) 32. SB 32 extends the GHG reduction objectives of AB 32 by mandating statewide reductions in GHG emissions to levels that are 40% below 1990 levels by the year 2030. The State has recently released a draft Scoping Plan for public review that sets forth strategies for achieving the SB 32 target. The draft Scoping Plan proposes to continue many of the programs that were part of the previous Scoping Plans, including the cap-and-trade program, low-carbon fuel standards, renewable energy, and methane reduction strategies. It also addresses for the first time GHG emissions from the natural and working lands of California, including the agriculture and forestry sectors (ARB 2017).

The SJVAPCD adopted a Climate Change Action Plan in 2008 and issued guidance for development project compliance with the plan in 2009. The guidance adopted an approach that relies on the use of Best Performance Standards to reduce GHG emissions. Projects implementing Best Performance Standards would be determined to have a less than cumulatively significant impact. For projects not implementing Best Performance Standards, demonstration of a 29% reduction in project-specific (i.e., operational) GHG emissions from business-as-usual conditions is required to determine that a project would have a less than cumulatively significant impact (SJVAPCD 2009).

Environmental Impacts and Mitigation Measures

a, b) Project GHG Emissions and Consistency with GHG Reduction Plans.

Based on results from the RCEM run (see Section 3.3, Air Quality), CO2 emissions from project construction are estimated to be 131.4 tons for the entire construction period. Construction emissions would be limited to a short time period and would cease once work is completed.

Upon completion, the levee would not generate any direct or indirect GHG emissions, other than emissions from occasional visits by maintenance vehicles, the emissions of which are considered minimal. As a result, the project would have no impact related to the GHG reduction objectives of the State's Climate Change Scoping Plan and the SJVAPCD's Climate Change Action Plan. Project impacts on GHG emissions are considered less than significant.

3.8 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				√
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			√	

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				√
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				√
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				√
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				√
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				√
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				√

NARRATIVE DISCUSSION

Environmental Setting

This section focuses on hazards associated with hazardous materials, proximity to airports, and wildfires. Geologic and soil hazards are addressed in Section 3.6, Geology and Soils, and potential flooding hazards are addressed in Section 3.9, Hydrology and Water Quality.

Data on hazardous material sites are kept in the GeoTracker database, maintained by the State Water Resources Control Board (SWRCB), and in the EnviroStor database, maintained by the California Department of Toxic Substances Control (DTSC). Both GeoTracker and EnviroStor provide the names and addresses of hazardous material sites, along with their cleanup status. A search of GeoTracker and EnviroStor indicated no record of active hazardous material sites (i.e., sites not cleaned up) at or within one-half mile of the project site (DTSC 2016, SWRCB 2016).

The project site is predominantly residential, with no significant industrial or commercial activities that would require the use and storage of hazardous materials except for the golf course, which uses herbicides, pesticides, and fertilizers. The project site is not near any public airports – the closest public airport is Stockton Metropolitan Airport, approximately 3.25 miles to the southeast. There are no private airstrips in the vicinity. Wildland fires are an annual hazard in San Joaquin County, but the high-hazard areas are the grass-covered areas in the east and the southwest foothills of the County (San Joaquin County 2016).

Environmental Impacts and Mitigation Measures

a) Transport, Use, and Disposal of Hazardous Materials.

The levee would not require the use of hazardous materials after construction work is completed, so no hazardous materials would be transported or stored as a result of the project. The project would have no impact on this issue.

b) Hazardous Material Releases

Construction activities may involve the use of hazardous materials such as fuels and solvents, which creates a potential for hazardous material spills. Construction vehicles would transport and use fuels in ordinary quantities. Fuel spills, if any occur, would be minimal and would not have significant adverse effects in the area. Work near the river would be subject to conditions of the permits required for the project, some of which would address potential water quality issues. Other substances used in the construction process would be stored in approved containers and used in relatively small quantities, in accordance with the manufacturers' recommendations and/or applicable regulations. As noted above, project operations would not involve the use of hazardous materials. Project impacts related to hazardous material releases would be less than significant.

c) Hazardous Material Emissions near Schools.

There are no schools within one-quarter mile of the project site, and the proposed levee improvements would not emit or release hazardous materials. The project would have no impact related to this issue.

d) Hazardous Materials Sites.

None of the lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5 contains sites within the project area. As previously noted, a search of the GeoTracker and EnviroStor databases did not identify any hazardous material sites within the project vicinity. A list of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit did not show any locations within the project area (CalEPA 2016a); likewise, a list by SWRCB containing sites under Cease and Desist Orders and Cleanup and Abatement Orders showed no locations (CalEPA 2016b). The project would have no impact related to hazardous material sites.

e, f) Public Airports and Private Airstrips.

There are no public airports or private airstrips within two miles of the project site. The project would have no impact related to airports or airstrips.

g) Emergency Response and Evacuation.

The project would be constructed on a levee and not on public roads that would be used by emergency vehicles in response to calls or as evacuation routes. The site plans state that the contractor shall not close any road, street, or highway to the public except with the permission of the District Engineer and the proper governmental authority. However, given the project location, it is not anticipated that any public road closures would be required. The project would have no impact on emergency responses or evacuations.

h) Wildland Fire Hazards.
The project site is in an urbanized area, which has a low wildfire hazard. There is riparian vegetation along French Camp Slough, but the proximity to the river ensures that this vegetation would not become dry enough to be a fire hazard. The project would have no impact on this issue.

3.9 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?			√	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				√
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				√
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				√
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems?				√
f) Otherwise substantially degrade water quality?			√	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			√	
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?			√	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of a levee or dam?				√
j) Inundation by seiche, tsunami, or mudflow?				√

NARRATIVE DISCUSSION

Environmental Setting

Water Resources and Water Quality

The project site is along French Camp Slough within the legally defined boundaries of the secondary area of the Sacramento-San Joaquin Delta, where the Sacramento and San Joaquin Rivers converge. The Delta is supplied by freshwater river flow, mainly from the Sacramento and San Joaquin Rivers, but it is also influenced by tides from the west, propagating from the Pacific Ocean through San Francisco Bay. French Camp Slough originates from several branches in eastern San Joaquin County and flows into the San Joaquin River west of the project site.

Groundwater resources beneath the project area are part of the vast Central Valley aquifer, which consists of unconsolidated sediments derived from the Coast Ranges and the Sierra Nevada Mountains. The project site is within the Eastern San Joaquin County Subbasin. As of the fall of 2016, groundwater levels in the project vicinity were between 30 and 40 feet below ground surface (San Joaquin County FCWCD 2016).

The RWQCB has listed pollutants for which water quality in the segment of French Camp Slough adjacent to the project site is considered impaired under Clean Water Act Section 303(d), along with the category of the pollutant (RWQCB 2010). Table 3-3 lists the pollutants and their sources.

TABLE 3-3
SECTION 303(D) LIST OF POLLUTANTS IN FRENCH CAMP SLOUGH

Pollutant	Pollutant Category	Potential Source
Chlorpyrifos	Pesticides	Agriculture
Diazinon	Pesticides	Agriculture
E. coli	Pathogens	Source Unknown
Oxygen, Dissolved	Nutrients	Source Unknown
Sediment Toxicity	Toxicity	Agriculture
Unknown Toxicity	Toxicity	Agriculture

Source: RWQCB 2010.

Flooding Hazards

Based on information from the Federal Emergency Management Agency (FEMA), the project site marks the boundary between Zone AE and Zone X (FEMA 2009). Zone AE delineates the 100-year floodplain with base flood elevations determined, while Zone X indicates areas protected from the 100-year flood by levees.

In 2007, the State Legislature adopted SB 5 and a series of related bills intended to set new flood protection standards for urban areas. For urban areas in the Central Valley, SB 5 establishes a standard of flood protection from a 200-year flood, and this standard of flood protection must be met by 2025. After July 2, 2016, new development in areas potentially exposed to a 200-year flood more than 3 feet in depth is prohibited, unless the local land use agency certifies that 200-year flood protection has been provided or that "adequate progress" has been made toward providing 200-year flood protection by 2025. Based on maps from DWR, the project site is

within a 200-year floodplain that could experience flood depths from 4 to 10 feet (City of Stockton 2016).

According to a dam failure plan prepared by the County Office of Emergency Services, the project site and vicinity is subject to inundation from a potential failure of New Melones Dam, San Luis Dam, Lake McClure, Camanche Dam, and New Hogan Dam (San Joaquin County OES 2003). Levee failures are not a rare occurrence in the Delta; since original reclamation, each of the 70 islands or tracts has flooded at least once (DWR 1995). RD 404 is threatened primarily from riverine floods along the San Joaquin River, Delta high tide events, or from failure of levee systems on the southeast side of Stockton along Mormon Slough (RD 404 2015).

Environmental Impacts and Mitigation Measures

a, f) Surface Waters and Water Quality.

The project would not affect surface waters or water quality. Project work would occur within a 20-foot wide segment at the top of the levee. A small amount of soil would be excavated from the levee top, after which sheet piling would be installed to a depth of approximately 30 feet from the top of the levee. The sheet piling would be continuous along the entire levee section. The installation area would be backfilled with imported fill material and the excavated soil would be disposed offsite, as would all other materials cleared and removed from the project site by the contractor. Standard construction BMPs would prevent any release of sediments that could adversely affect water quality in French Camp Slough.

b) Groundwater Supplies and Quality.

The project would not require the use of groundwater. Construction work would not be conducted at the depth of the levee and would not require excavation or other activities that could potentially disturb aquifers. The project would have no impact on groundwater supplies.

c, d, e) Drainage and Runoff.

Project improvements would occur within the levee footprint. The results of the work would not alter the flow of French Camp Slough or the existing surface drainage pattern in the area, as runoff on the waterside would continue to flow into the river and runoff on the landside would still go to adjacent lands. The project would not generate additional stormwater runoff, as it would not add any impervious surfaces. The project would have no impact on drainage and runoff.

g, h) Flooding Hazards.

The project is the improvement of a levee along the north bank of French Camp Slough. With completion of the project, the structural integrity of the levee would be greatly improved, and incidents of seepage would be reduced or eliminated. As a result, the levee would be better able to withstand future high water volume and flow events, thereby providing improved flood protection for the adjacent urban development.

The project would not place housing or other structures within a 100-year floodplain. As the levee is already in place, the project would not impede or redirect flood flows. Project impacts on flooding would be less than significant, and would have a beneficial impact.

i) Dam and Levee Failure Hazards.

The project site is located within potential inundation zones of several facilities were they to fail. The probability of failure of the specified dams and reservoirs is considered low, and the project would have no change on the potential hazard at the project site. As previously discussed, the purpose of the project is to improve the structural integrity of the levee along French Camp Slough, which would reduce the probability of failure of this levee. The project is considered to have no impact related to dam and levee inundation hazards, and would have a beneficial impact related to potential levee failure.

j) Seiche, Tsunami and Mudflow Hazards.

The project is located in a topographically flat area away from large bodies of water, so the project site would not be subject to seiche, tsunami or mudflow hazards. The project would have no impact related to this issue.

3.10 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				√
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			√	
c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?			√	

NARRATIVE DISCUSSION

Environmental Setting

As noted in Section 3.5, Cultural Resources, RD 404 was originally established for agricultural land uses. RD 404 is now an urbanized area in the City of Stockton and unincorporated San Joaquin County. Residences are a predominant land use in RD 404; the population in the district is estimated to be in excess of 10,000 residents. Industrial land uses also are significant; major facilities include the Port of Stockton, a regional fuel storage area, a large industrial area, and the Stockton Regional Wastewater Treatment Plant (RD 404 2015).

The project site is adjacent to the Van Buskirk Municipal Golf Course, a recreational facility owned by the City of Stockton. North of the golf course are residential areas and John Marshall Elementary School. The City of Stockton General Plan has designated the land adjacent to the project site as Parks and Recreation. City zoning for the land adjacent to the project site is PF, Public Facilities.

Environmental Impacts and Mitigation Measures

a) Division of Established Communities.

The project would occur within the existing levee footprint. The existing levee does not divide an established community. The project would have no impact related to this issue.

b) Conflict with Actions Adopted to Avoid or Minimize Environmental Impacts.

The project is an improvement to an existing levee. Construction work would occur within the existing levee footprint and would not extend into the adjacent French Camp Slough and its banks or into the adjacent golf course. Project impacts on land use plans, policies, or ordinances adopted to avoid or minimize environmental impacts are considered less than significant.

c) Conflict with Habitat Conservation Plans.

As discussed in Section 3.4, Biological Resources, RD 404 may choose to participate in the SJMSCP for this project. However, if RD 404 chooses not to participate, then mitigation measures described in Section 3.4 would reduce impacts on affected biological resources to a level that would be less than significant. Therefore, potential conflicts with the SJMSCP are considered less than significant.

3.11 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				√
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				√

NARRATIVE DISCUSSION

Environmental Setting

The mineral resource development potential of lands in the counties is classified by the State Geologist into Mineral Resource Zones (MRZs), in accordance with the California Mineral Land Classification System. The classifications include:

MRZ-1 Areas of No Mineral Resource Significance

MRZ-2 Areas of Identified Mineral Resource Significance

MRZ-3 Areas of Undetermined Mineral Resource Significance

MRZ-4 Areas of Unknown Mineral Resource Significance

According to the City of Stockton General Plan Background Report, all of the land within the Stockton Planning Area, other than a portion between Eight Mile Road and the City of Lodi, is classified MRZ-1 (City of Stockton 2007). There are no active oil or natural gas fields in Stockton – the nearest active field to the project site is the French Camp field to the south (DOGGR 2001).

Environmental Impacts and Mitigation Measures

a, b) Availability of Mineral Resources.

Since there are no identified mineral resources at the project site, the project would have no effect on the availability of or access to locally designated or known mineral resources. The project would have no impact on mineral resources.

3.12 NOISE

Would the project result in:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		√		
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			√	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				√
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		√		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				√
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				√

NARRATIVE DISCUSSION

Environmental Setting

Noise is often described as unwanted sound, which is any pressure variation in air that the human ear can detect. Since measuring sound by pressure would require a large and awkward range of numbers, the decibel (dB) scale was devised. This scale is typically adjusted for perception of loudness by the standardized A-weighting network, which provides a strong correlation between A-weighted sound levels (expressed as dBA) and community noise.

Community noise is commonly described in terms of the "ambient" noise level – the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state, dBA sound level containing the same total energy as a time-varying signal over a given time period, usually one hour. The L_{eq} shows very good correlation with community response to noise, and it is the basis for other noise descriptors.

The project site itself generates no noise other than from occasional trips by RD 404 vehicles. In the vicinity of the project site, the primary source of noise is vehicle traffic on nearby streets and roads and on Interstate 5 to the east. Another source of noise received at the project site is associated with operations at the golf course, which are not considered a significant noise source.

RD 404 has no noise regulations, but the project site is adjacent to the City of Stockton. The City's zoning ordinance, in Section 16.60.040 of the Stockton Municipal Code, states that commercial, industrial, or public facilities land uses adjacent to any noise-sensitive land uses or vacant residential (RE, RL, RM, or RH) or open space (OS) zoning districts shall comply with the performance standards set forth in Table 3-4 below. In addition, Stockton Municipal Code Section 16.60.030(A) prohibits the operation of construction equipment on private property during the hours of 10:00 p.m. to 7:00 a.m. such that the sound creates a noise disturbance across a residential property line.

TABLE 3-4
CITY OF STOCKTON NOISE PERFORMANCE STANDARDS

	Outdoor Activity Areas, RE, RL, RM, RH, and OS zones	
Noise Level Descriptor	**Day (7:00 a.m. to 10:00 p.m.)**	**Night (10:00 p.m. to 7:00 a.m.)**
Hourly equivalent sound level (L_{eq}), dB	55	45
Maximum sound level, dB	75	65

Source: Stockton Municipal Code Section 16.60.040.

Environmental Impacts and Mitigation Measures

a) Exposure to Noise Exceeding Local Standards.

Project construction activities could expose patrons at the golf course adjacent to the project site to significant short-term noise impacts. Grading, earthmoving and pile-driving would be the main construction activities. Based on the equipment anticipated to be used, construction of proposed

facilities and improvement may generate maximum noise levels ranging from 81 to 95 dBA at a reference distance of 50 feet (FHWA 2006).

Construction noise is a short-term occurrence that does not result in significant or long-term noise effects, particularly since no noise would be generated by the levee after construction work is completed. Also, while noise at recreational facilities may decrease enjoyment of the recreational experience, recreational land uses are not considered as sensitive as residences, schools, or health care facilities. Nevertheless, the short-term impacts of construction noise are considered potentially significant and requiring mitigation. Mitigation described below would minimize the noise level generated by construction equipment, thereby reducing construction noise impacts to a level considered less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: All construction equipment used at the project site shall be fitted with mufflers in accordance with manufacturers' specifications. Mufflers shall be installed on the equipment at all times on the construction site.

Significance After Mitigation: Less than significant

b) Exposure to Groundborne Vibrations.

Groundborne vibration is not a common environmental problem. It is typically associated with transportation facilities, although it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving and operating heavy earth-moving equipment.

The project would likely use some trenching and earthmoving equipment during construction, vibrations from which could affect adjacent land uses. The adjacent land use is recreational, which is not considered as sensitive to vibrations as residences, schools, or health care facilities. Construction work would be temporary, and any vibrations would cease once work is completed. Project impacts are considered less than significant.

c) Permanent Increase in Ambient Noise.

The levee would not generate any noise after construction work is completed. The project would have no impact on ambient noise levels.

d) Temporary or Periodic Increase in Ambient Noise.

As discussed in a) above, the project would generate a temporary increase in ambient noise from construction activities. Mitigation Measure NOISE-1 would reduce potential impacts to a level considered less than significant.

e, f) Noise from Public Airports and Private Airstrips.

As discussed in Section 3.8, Hazards and Hazardous Materials, there are no public airports or private airstrips in the vicinity, so noise from these sources would not affect the project site. The project would have no impact on this issue.

3.13 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				√
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				√
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				√

NARRATIVE DISCUSSION

Environmental Setting

As of January 1, 2017, the population of Stockton was estimated at 320,554 (California Department of Finance 2017). The project site is located in Census Tract 25.03 in San Joaquin County. Compared to the United States and to the State of California, Census Tract 25.03 has a higher proportion of black, Asian, and Hispanic residents, and residents identifying as a member of some other race than listed in the U.S. Census. Census Tract 25.03 also has a higher proportion of residents living below the poverty level and of households earning less than $25,000 per year (U.S. Census Bureau 2014, 2015).

Stockton had an estimated 100,254 housing units as of January 1, 2017. Single-family detached units accounted for approximately 64.8% of total housing units in Stockton, with multifamily units of two or more per building accounting for 26.9% (California Department of Finance 2017).

Environmental Impacts and Mitigation Measures

a) Population Growth Inducement.

The project is the improvement of an existing levee. It would not construct residences or other development that would encourage population growth in the area. While levee improvements would provide better flood protection for adjacent lands, these lands are already developed and no further development is expected to occur. The project would have no impact on population growth, either directly or indirectly.

b, c) Displacement of Housing or People.

The project would be confined to the existing levee footprint. No housing or residents would be displaced as a result of the project. The project would have no impact on this issue.

3.14 PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?				√
b) Police protection?				√
c) Schools?				√
d) Parks?				√
e) Other public facilities?				√

NARRATIVE DISCUSSION

Environmental Setting

Fire protection services in the project vicinity are provided by the Stockton Fire Department. The nearest fire station to the project site is Station 10 at 2903 West March Lane. Law enforcement services are provided by the Stockton Police Department, with its main station at 22 East Market Street. John Marshall Elementary School, approximately 0.35 miles northeast of the project site, is part of the Stockton Unified School District. The City of Stockton Community Services Department provides park and recreational services to City residents. One of its facilities is the Van Buskirk Municipal Golf Course, adjacent to the project site.

Environmental Impacts and Mitigation Measures

a) Fire Protection.

The project is the improvement of an existing levee. As discussed in Section 3.13, Population and Housing, the project would not create additional housing nor generate population growth. Because of this, it would not create additional demand for fire protection services. No new or expanded fire protection facilities that could have environmental impacts would be required. The project would have no impact on this issue.

b) Police Protection.

The project would not create additional demand for police protection services. No new or expanded police protection facilities that could have environmental impacts would be required. The project would have no impact on this issue.

c) Schools.

The project would not create additional demand for school services. No new or expanded school facilities that could have environmental impacts would be required. The project would have no impact on this issue.

d, e) Parks and Other Public Facilities.

The project would not create additional demand for parks or other public facilities. No new or expanded facilities that could have environmental impacts would be required. The project would have no impact on this issue.

3.15 RECREATION

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				√
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				√

NARRATIVE DISCUSSION

Environmental Setting

As noted in Section 3.14, Public Services, the Stockton Community Services Department provides park and recreational services to City residents. The Van Buskirk Municipal Golf Course, an 18-hole course owned by the City of Stockton, is adjacent to the project site. French Camp Slough potentially offers fishing and boating recreation. The French Camp Slough Trail is located on the south bank of French Camp Slough across from the project site. This paved trail is available for bicycling and walking.

Environmental Impacts and Mitigation Measures

a, b) Recreational Facilities.

The project is the improvement of an existing levee. As discussed in Section 3.13, Population and Housing, the project would not create additional housing nor generate population growth. Because of this, it would not create additional demand for recreational facilities. No new or expanded facilities that could have environmental impacts would be required. The project would have no impact on this issue.

3.16 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				√
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				√
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				√
d) Substantially increase hazards to a design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?				√
e) Result in inadequate emergency access?				√
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				√

NARRATIVE DISCUSSION

Environmental Setting

The project site is not adjacent to any public roads or streets. Access to the project site is available by a road on top of the existing levee, which primarily serves RD 404 vehicles. Access to this levee road is available from Manthey Road to the east, but this access is gated.

The San Joaquin Regional Transit District provides public transit service to the residential area north of the Van Buskirk Municipal Golf Course, including Routes 54 and 315. The French Camp Slough Trail, along the south bank of French Camp Slough across from the project site, is a Class I bicycle path. Pedestrian sidewalks are installed in the residential area north of the golf course, and pedestrians also may use the French Camp Trail.

Environmental Impacts and Mitigation Measures

a) Consistency with Applicable Plans, Ordinances and Policies.

The project is the improvement of an existing levee. It would generate some traffic on roads in the vicinity during construction activities, but it would generate no traffic upon completion of improvement work, other than occasional visits by RD 404 vehicles. The project would have no impact on traffic conditions on streets in the vicinity after construction work is completed. Because of this, it would have no impact on applicable plans, ordinances and policies related to traffic.

b) Conflict with Congestion Management Program.

The SJCOG adopted the latest version of its Regional Congestion Management Plan in 2012. The Regional Congestion Management Plan is designed to coordinate land use, air quality and transportation planning to reduce potential congestion from traffic generated by development (SJCOG 2012). Since the project would not generate traffic after construction work is completed, it would have no impact on activities designed to achieve the objectives of the Regional Congestion Management Plan.

c) Air Traffic Patterns.

As discussed in in Section 3.8, Hazards and Hazardous Materials, there are no public airports in the project vicinity. The project would not generate air traffic, so there would be no impact on nearby airports. The project would have no impact on this issue.

d, e) Traffic Hazards and Emergency Access.

The project would not alter or obstruct the existing road system in the project vicinity. Existing road and emergency access conditions in the vicinity would not change. The site plans state that the contractor shall be responsible for maintaining access along the levee road and access roads at all times during project construction. Any damage to the levee road or access roads shall be repaired immediately by the contractor at the contractor's expense. The project would have no impact on traffic hazards or on emergency access.

f) Conflict with Non-vehicular Transportation Plans.

The project is the improvement of an existing levee off public roads and trails. The project would not affect existing bus routes, bikeways, or sidewalks. Because of this, the project would have no impact on non-vehicular transportation plans.

3.17 TRIBAL CULTURAL RESOURCES

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

NARRATIVE DISCUSSION

Environmental Setting

In 2015, the California Legislature enacted AB 52, which focuses on consultation with Native American tribes on land use issues potentially affecting the tribes. The intent of this consultation is to avoid or mitigate potential impacts on "tribal cultural resources," which are defined as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe." More specifically, Public Resources Code Section 21074 defines tribal cultural resources as:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are included or determined to be eligible for inclusion in the California Register of Historical Resources, or included in a local register of historical resources; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 [i.e., eligible for inclusion in the California Register of Historical Resources].

Under AB 52, when a tribe requests consultation with a CEQA lead agency on projects within its traditionally and culturally affiliated geographical area, the lead agency must provide the tribe with notice of a proposed project within 14 days of a project application being deemed complete

or when the lead agency decides to undertake the project if it is the agency's own project. The tribe has up to 30 days to respond to the notice and request consultation; if consultation is requested, then the local agency has up to 30 days to initiate consultation.

In 2016, the Governor's Office of Planning and Research updated Appendix G of the CEQA Guidelines to include sample questions specifically addressing tribal cultural resources. These questions have been incorporated within this IS/MND.

As previously noted, the project area is located within lands claimed by the Northern Valley Yokuts at the time of initial contact with European Americans. Section 3.5, Cultural Resources, discusses the Yokuts in more detail.

Environmental Impacts and Mitigation Measures

a, b) Tribal Cultural Resources.

As noted in Section 3.5, Cultural Resources, an archaeological inventory survey of the project area was prepared by Genesis Society, which involved a records search through the Central California Information Center, contact with the Native American Heritage Commission, and a field survey of the project site. The search through the Central California Information Center did not reveal any recorded archaeological resources within the project site, and only one archaeological resource recorded within one-quarter mile of the site - a prehistoric burial that was severely disturbed by levee construction. The field survey found no evidence of prehistoric activity or occupation.

An information request letter was sent to the Native American Heritage Commission, but no response was received at the time the survey report was prepared. Since no prehistoric cultural material was identified by both the records search and the field survey, no additional consultation with Native American tribes or agencies was undertaken.

Based on the information from the archaeological survey, the project is unlikely to affect tribal cultural resources as defined by AB 52. Project impacts are considered less than significant. However, RD 404 will comply with the provisions of AB 52 should a tribe whose traditionally and culturally affiliated geographical area includes the project site request consultation.

3.18 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				√
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				√

c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				√
d) Are sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				√
e) Has the wastewater treatment provider which serves or may serve the project determined that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				√
f) Is the project served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				√
g) Comply with federal, state and local statutes and regulations related to solid waste?				√

NARRATIVE DISCUSSION

Environmental Setting

The proposed project site is located in a developed urban area. Sewage collection and treatment services and storm drainage services in RD 404 are provided by the City of Stockton. Water services are provided by California Water Service (Cal Water). Solid waste collection services in RD 404 are provided by Sunrise Sanitation. The collected solid waste is sent to two landfills operated by San Joaquin County: the North County Sanitary Landfill on Harney Lane east of the City of Lodi, and the Foothill Sanitary Landfill on Waverly Road east of the community of Linden.

High-voltage overhead electrical lines cross the center of the project site. Overhead electrical and telephone lines cross the entry to the levee road at Manthey Road. The project site plan notes that the contractor shall identify power lines within the construction zone, and extreme caution is advised while working around and near the live lines. No other utility lines are known to cross the project site.

Environmental Impacts and Mitigation Measures

a, e) Wastewater Systems.

The project is the improvement of an existing levee. As discussed in Section 3.13, Population and Housing, the project would not create additional housing nor generate population growth. Because of this, it would not generate a demand for wastewater services. The project would have no impact on this issue.

b, d) Water Systems and Supply.

The project would not generate a demand for water services or on water supplies. The project would have no impact on this issue.

c) Stormwater Systems.

The project would not generate a demand for stormwater services. The project would have no impact on this issue.

f, g) Solid Waste Services.

The project would not generate a demand for solid waste collection services or landfill capacity. The project would have no impact on this issue.

3.19 MANDATORY FINDINGS OF SIGNIFICANCE

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

NARRATIVE DISCUSSION

Finding a) – Biological and Cultural Resources.

The biological and cultural resource impacts of the project are described in Sections 3.4 and 3.5, respectively. Potentially significant environmental effects were identified in these issue areas, but mitigation measures that would be incorporated into the project would reduce all of these effects to a level that would be less than significant.

Finding b) – Cumulatively Considerable Impacts.

As described in this Initial Study, the potential environmental effects of the project would either be less than significant, or the project would have no impact at all, when compared to the baseline. Where the project involves potentially significant effects, proposed mitigation measures and compliance with required permits and applicable regulations would reduce these effects to a level that is less than significant.

The potential environmental effects identified in this Initial Study have been considered in conjunction with each other as to their potential to generate other potentially significant effects. The various potential environmental effects of the project would not combine to generate any potentially significant cumulative effects. There are no other known, similar projects with which the project might combine to produce adverse cumulative impacts. In combination with other proposed levee improvements in Stockton and San Joaquin County, the project would have a cumulatively beneficial impact by providing improved flood protection for the area.

Finding c) – Adverse Effects on Human Beings.

Potential adverse effects on human beings were discussed in Section 3.6, Geology and Soils (seismic hazards); Section 3.8, Hazards and Hazardous Materials; Section 3.9, Hydrology and Water Quality (flooding); and Section 3.16, Transportation/Traffic (traffic hazards). No potential adverse effects on human beings were identified in these sections. The project would have a beneficial effect for people in the vicinity, as it would improve the structural integrity of the levee, thereby reducing the potential for breaching with subsequent flooding.

4.0 REFERENCES

4.1 DOCUMENT PREPARERS

This IS/MND was prepared by BaseCamp Environmental, Inc. for use by and under the supervision of Reclamation District 404. The following persons were involved in preparation of the IS/MND:

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5.0 NOTES RELATED TO EVALUATION OF ENVIRONMENTAL IMPACTS

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063(c)(3)(D)). In this case, a brief discussion should identify the following:

   a) Earlier Analyses Used: Identify and state where they are available for review.

   b) Impacts Adequately Addressed: Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures: For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures, which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The checklist in CEQA Guidelines Appendix G is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

APPENDIX A
AIR QUALITY MODELING RESULTS

Road Construction Emissions Model
Data Entry Worksheet

Version 7.1.5.1

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a
yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells C10 through C25.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type		
Project Name	RD 404 Levee	
Construction Start Year	2018	Enter a Year between 2009 and 2025 (inclusive)
Project Type	2	1 New Road Construction 2 Road Widening 3 Bridge/Overpass Construction
Project Construction Time	3.00	months
Predominant Soil/Site Type: Enter 1, 2, or 3	1	1. Sand Gravel 2. Weathered Rock-Earth 3. Blasted Rock
Project Length	0.21	miles
Total Project Area	0.76	acres
Maximum Area Disturbed/Day	0.01	acres
Water Trucks Used?	1	1. Yes 2. No
Soil Imported	0.00	yd^3/day
Soil Exported	0.00	yd^3/day
Average Truck Capacity	20	yd^3 (assume 20 if unknown)

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells C34 through C37.

Construction Periods	User Override of Construction Months	Program Calculated Months	2005	%	2006	%	2007	%
Grubbing/Land Clearing	0.50	0.30	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation	1.75	1.20	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	0.50	1.05	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.25	0.45	0.00	0.00	0.00	0.00	0.00	0.00
Totals	3.00	3.00						

NOTE: soil hauling emissions are included in the Grading/Excavation Construction Period Phase, therefore the Construction Period for Grading/Excavation cannot be zero if hauling is part of the project.
Hauling emission default values can be overridden in cells C45 through C46.

Soil Hauling Emissions

User Input	User Override of Soil Hauling Defaults	Default Values
Miles/round trip		30
Round trips/day		0
Vehicle miles traveled/day (calculated)		0

Hauling Emissions	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate (grams/mile)	0.15	6.66	0.67	0.16	0.09	1624.61
Emission rate (grams/trip)	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day	0.00	0.00	0.00	0.00	0.00	0.00
Tons per contruction period	0.00	0.00	0.00	0.00	0.00	0.00

Worker commute default values can be overridden in cells C60 through C65.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values
Miles/ one-way trip		20
One-way trips/day		2
No. of employees: Grubbing/Land Clearing		5
No. of employees: Grading/Excavation		20
No. of employees: Drainage/Utilities/Sub-Grade		14
No. of employees: Paving		10

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.120	0.154	1.399	0.047	0.020	443.880
Emission rate - Grading/Excavation (grams/mile)	0.120	0.154	1.399	0.047	0.020	443.880
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.120	0.154	1.399	0.047	0.020	443.880
Emission rate - Paving (grams/mile)	0.120	0.154	1.399	0.047	0.020	443.880
Emission rate - Grubbing/Land Clearing (grams/trip)	0.415	0.255	3.410	0.004	0.003	95.711
Emission rate - Grading/Excavation (grams/trip)	0.415	0.255	3.410	0.004	0.003	95.711
Emission rate - Draining/Utilities/Sub-Grade (gr/trip)	0.415	0.255	3.410	0.004	0.003	95.711
Emission rate - Paving (grams/trip)	0.415	0.255	3.410	0.004	0.003	95.711
Pounds per day - Grubbing/Land Clearing	0.062	0.074	0.691	0.021	0.009	197.650
Tons per const. Period - Grub/Land Clear	0.000	0.000	0.004	0.000	0.000	1.087
Pounds per day - Grading/Excavation	0.248	0.294	2.765	0.083	0.035	790.600
Tons per const. Period - Grading/Excavation	0.005	0.006	0.053	0.002	0.001	15.219
Pounds per day - Drainage/Utilities/Sub-Grade	0.171	0.202	1.901	0.057	0.024	543.538
Tons per const. Period - Drain/Util/Sub-Grade	0.001	0.001	0.010	0.000	0.000	2.989
Pounds per day - Paving	0.124	0.147	1.383	0.041	0.017	395.300
Tons per const. Period - Paving	0.000	0.000	0.004	0.000	0.000	1.087
tons per construction period	0.006	0.008	0.071	0.002	0.001	20.383

Water truck default values can be overriden in cells C91 through C93 and E91 through E93.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Miles Traveled/Day	Default Values Miles Traveled/Day
Grubbing/Land Clearing - Exhaust		1		40
Grading/Excavation - Exhaust		1		40
Drainage/Utilities/Subgrade		1		40

	ROG	NOx	CO	PM10	PM2.5	CO2
Emission rate - Grubbing/Land Clearing (grams/mile)	0.15	6.66	0.67	0.16	0.09	1624.61
Emission rate - Grading/Excavation (grams/mile)	0.15	6.66	0.67	0.16	0.09	1624.61
Emission rate - Draining/Utilities/Sub-Grade (gr/mile)	0.15	6.66	0.67	0.16	0.09	1624.61
Pounds per day - Grubbing/Land Clearing	0.01	0.59	0.06	0.01	0.01	143.14
Tons per const. Period - Grub/Land Clear	0.00	0.00	0.00	0.00	0.00	0.79
Pound per day - Grading/Excavation	0.01	0.59	0.06	0.01	0.01	143.14
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	2.76
Pound per day - Drainage/Utilities/Subgrade	0.01	0.59	0.06	0.01	0.01	143.14
Tons per const. Period - Drainage/Utilities/Subgrade	0.00	0.00	0.00	0.00	0.00	0.79

Fugitive dust default values can be overridden in cells C110 through C112.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		0.01	0.1	0.0	0.0	0.0

Fugitive Dust - Grading/Excavation		0.01	0.1	0.0	0.0	0.0	
Fugitive Dust - Drainage/Utilities/Subgrade		0.01	0.1	0.0	0.0	0.0	

Off-Road Equipment Emissions

Grubbing/Land Clearing	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
	1	Crawler Tractors	0.66	4.47	8.32	0.31	0.29	824.93
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Excavators	0.31	2.79	3.20	0.16	0.14	572.78
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
		Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grubbing/Land Clearing	pounds per day	1.0	7.3	11.5	0.5	0.4	1397.7
	Grubbing/Land Clearing	tons per phase	0.0	0.0	0.1	0.0	0.0	7.7

Grading/Excavation	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
	0	Cranes	0.00	0.00	0.00	0.00	0.00	0.00

	1	Crawler Tractors	0.66	4.47	8.32	0.31	0.29	824.93
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Excavators	0.31	2.79	3.20	0.16	0.14	572.78
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Graders	0.87	3.46	8.31	0.47	0.43	667.39
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Rollers	0.27	1.51	2.48	0.17	0.16	279.43
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rubber Tired Loaders	0.44	3.11	5.26	0.18	0.16	662.49
1.00	2	Scrapers	1.19	7.26	14.04	0.55	0.51	1608.56
0.00	1	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	4	Tractors/Loaders/Backhoes	0.28	1.57	2.64	0.19	0.17	335.03
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Grading/Excavation	pounds per day	4.0	24.2	44.3	2.0	1.9	4950.6
	Grading	tons per phase	0.1	0.5	0.9	0.0	0.0	95.3

Drainage/Utilities/Subgrade	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*		pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Air Compressors	0.58	3.40	3.86	0.30	0.27	507.95
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
	1	Generator Sets	0.43	2.96	3.42	0.23	0.21	487.07
	1	Graders	0.87	3.46	8.31	0.47	0.43	667.39
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Pavers	0.00	0.00	0.00	0.00	0.00	0.00
		Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Plate Compactors	0.04	0.21	0.25	0.01	0.01	34.45
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pumps	0.36	2.44	2.83	0.19	0.18	396.14

		Rollers	0.00	0.00	0.00	0.00	0.00	0.00
	1	Rough Terrain Forklifts	0.17	2.03	2.02	0.10	0.09	372.67
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
	1	Scrapers	1.19	7.26	14.04	0.55	0.51	1608.56
0.00	1	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Tractors/Loaders/Backhoes	0.28	1.57	2.64	0.19	0.17	335.03
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Drainage	pounds per day	3.9	23.3	37.4	2.0	1.9	4409.3
	Drainage	tons per phase	0.0	0.1	0.2	0.0	0.0	24.3

Paving	Default Number of Vehicles		ROG	CO	NOx	PM10	PM2.5	CO2
Override of Default Number of Vehicles	*Program-estimate*	Type	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day	pounds/day
		Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00
		Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00
		Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00
		Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00
		Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00
		Cranes	0.00	0.00	0.00	0.00	0.00	0.00
		Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Excavators	0.00	0.00	0.00	0.00	0.00	0.00
		Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00
		Graders	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00
		Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00
		Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00
	1	Pavers	0.33	2.84	3.45	0.17	0.16	482.19
	1	Paving Equipment	0.24	2.69	2.59	0.13	0.12	426.37
		Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00
		Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00
		Pumps	0.00	0.00	0.00	0.00	0.00	0.00
1.00	2	Rollers	0.27	1.51	2.48	0.17	0.16	279.43
		Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00
		Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Scrapers	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00
		Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00
		Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00
		Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00
1.00	3	Tractors/Loaders/Backhoes	0.28	1.57	2.64	0.19	0.17	335.03
		Trenchers	0.00	0.00	0.00	0.00	0.00	0.00
		Welders	0.00	0.00	0.00	0.00	0.00	0.00
	Paving	pounds per day	1.1	8.6	11.2	0.7	0.6	1523.0
	Paving	tons per phase	0.0	0.0	0.0	0.0	0.0	4.2

Total Emissions all Phases (tons per construction period) =>	0.1	0.7	1.2	0.1	0.1	131.4

Equipment default values for horsepower and hours/day can be overridden in cells C289 through C322 and E289 through E322.

Equipment		Default Values Horsepower		Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		106		8
Bore/Drill Rigs		206		8
Cement and Mortar Mixers		10		8
Concrete/Industrial Saws		64		8
Cranes		226		8
Crawler Tractors		208		8
Crushing/Proc. Equipment		142		8
Excavators		163		8
Forklifts		89		8
Generator Sets		66		8
Graders		175		8
Off-Highway Tractors		123		8
Off-Highway Trucks		400		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		167		8
Pavers		126		8
Paving Equipment		131		8
Plate Compactors		8		8
Pressure Washers		26		8
Pumps		53		8
Rollers		81		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		255		8
Rubber Tired Loaders		200		8
Scrapers		362		8
Signal Boards		20		8
Skid Steer Loaders		65		8
Surfacing Equipment		254		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		98		8
Trenchers		81		8
Welders		45		8

0

END OF DATA ENTRY SHEET

APPENDIX B
BIOLOGICAL ASSESSMENT

MOORE BIOLOGICAL CONSULTANTS

June 15, 2017

Mr. Charlie Simpson
BaseCamp Environmental, Inc.
115 South School Street, Ste.14
Lodi, CA 95240

Subject: BIOLOGICAL ASSESSMENT FOR RECLAMATION DISTRICT 404 "FRENCH CAMP SLOUGH CUTOFF WALL" PROJECT, SAN JOAQUIN COUNTY, CALIFORNIA

Dear Charlie:

On behalf of Reclamation District 404, thank you for asking Moore Biological Consultants to conduct a baseline biological resources assessment for the "French Camp Slough Cuttoff Wall" Project in south Stockton, California (Figures 1 and 2). The purpose of this assessment is to describe existing biological resources in the project site, identify potentially significant impacts to biological resources from the project, and provide recommendations for how to reduce those impacts to a less-than-significant level. The work involved reviewing databases, aerial photographs, and documents, and conducting a field survey to document vegetation communities, potentially jurisdictional Waters of the U.S. and/or wetlands, and potentially suitable habitat for or presence of special-status species. This report details the methodology and results of our investigation.

Project Overview

The project is the improvement of approximately 1,200 linear feet of an earthen levee along the north bank of French Camp Slough between Stations 38+00 and 50+00 (Attachment A). The proposed cutoff wall will consist of vinyl sheetpiles, which would be driven from the levee top down to a depth of approximately 30

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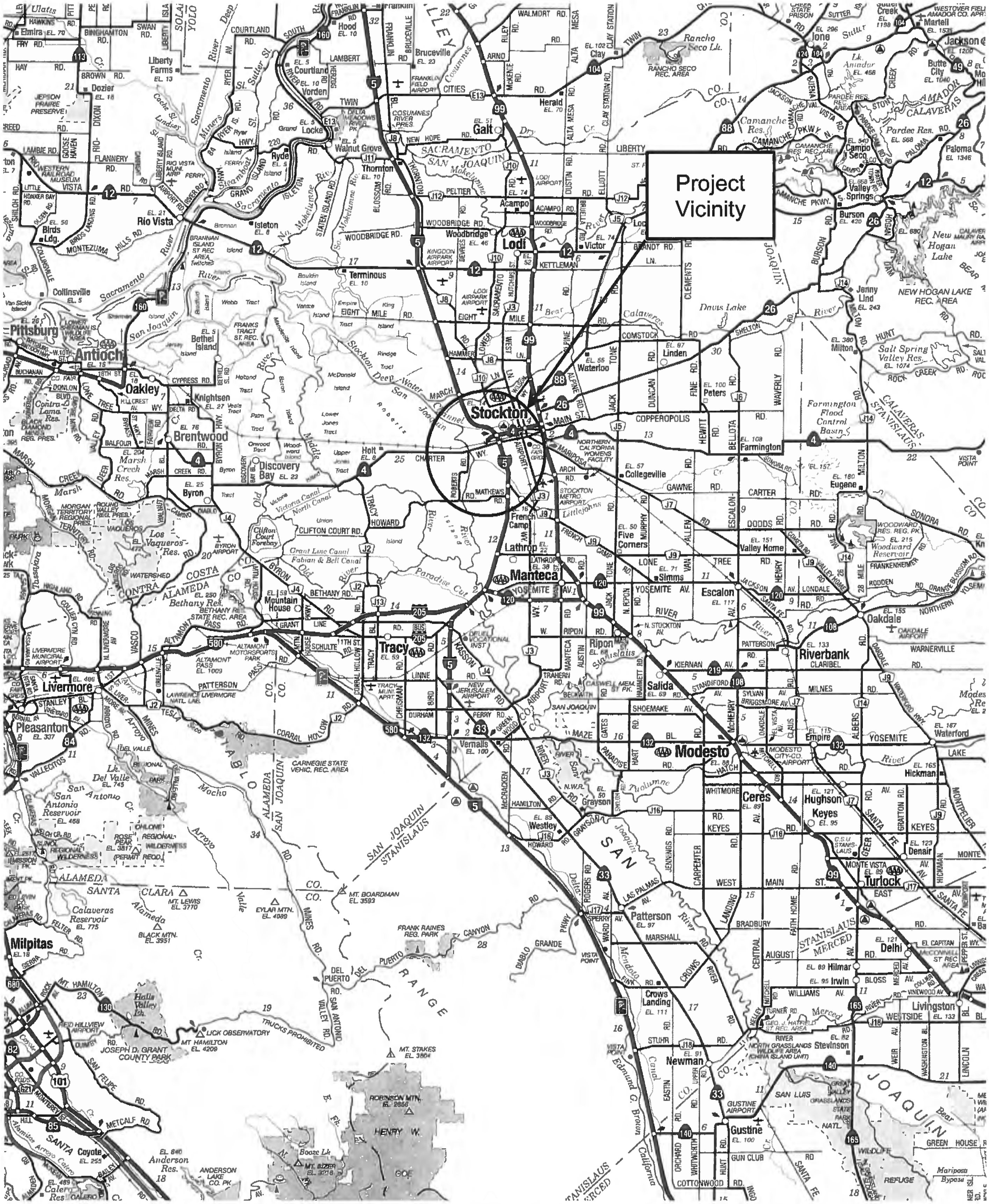

Source: Calif. State Automobile Association

Moore Biological Consultants	0 — 18 Miles; N, S, E, W	**FIGURE 1** **PROJECT VICINITY**

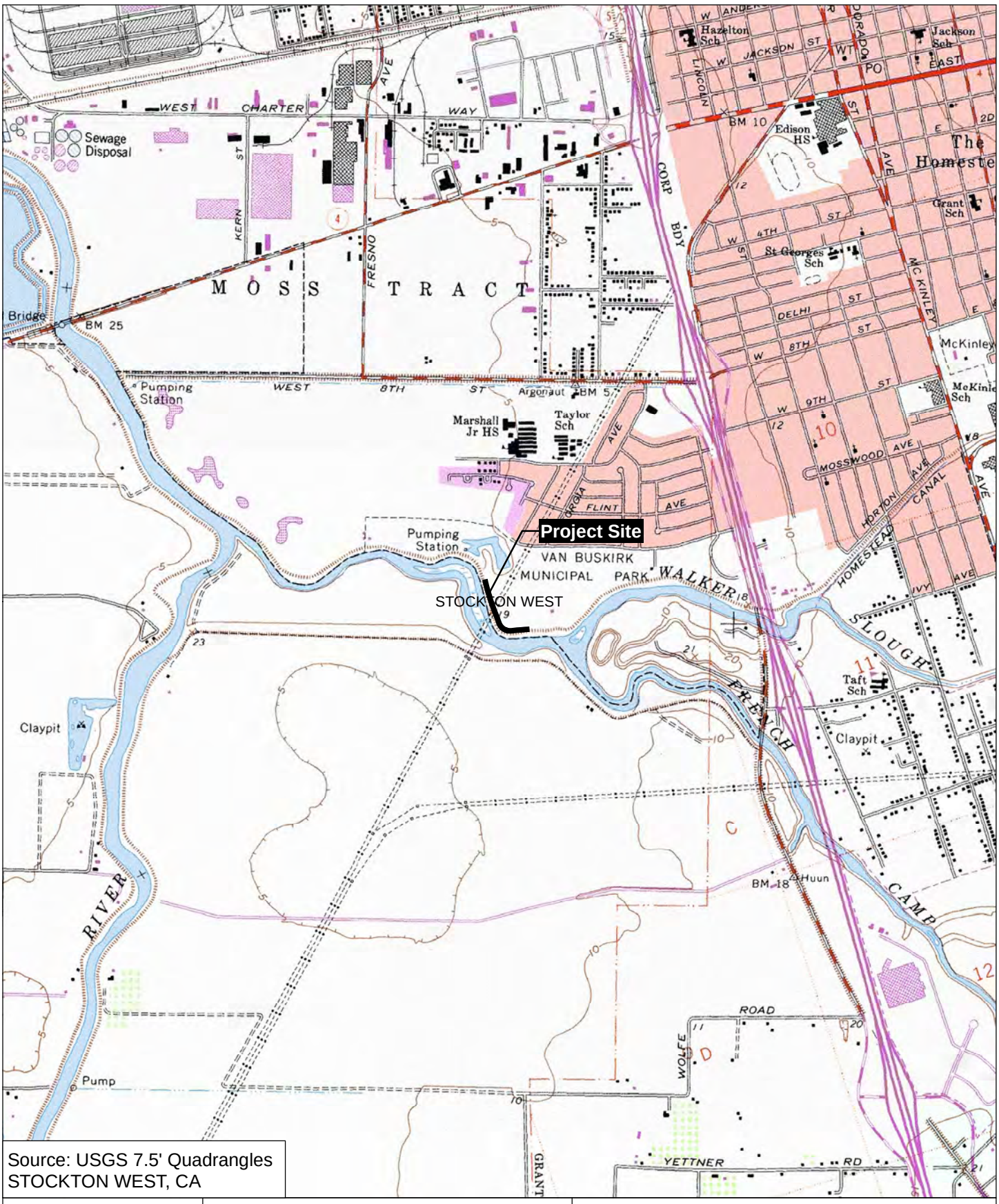

Figure 2

Moore Biological Consultants

0 1,000 2,000

1 inch = 2,000 feet

N
W E
S

USGS

French Camp Slough Cut-Off Wall

San Joaquin County, CA

Map Date: 04/24/2017

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feet in the center of the levee following minor excavation along the top of the levee. Alternately, a slurry wall consisting of soil bentonite mixture may be installed. An all-weather access road with a 6-inch minimum aggregate base will be constructed on the levee top after installation of the cutoff wall.

The work will be restricted to a 20-foot wide swath along the levee crown and the very tops of the levee slope adjacent to the crown; there will be no work in French Camp Slough or on the waterside levee slope at or near the water line. The soil that is removed from the levee crown will be transported and disposed of off-site. Construction vehicles and equipment will access the site along the levee from Manthey Road and staging will occur on the levee crown and possibly a parking lot near Manthey Road.

Methods

Prior to the field survey, we conducted a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB, 2017). The CNDDB search encompassed USGS 7.5-minute Stockton West topographic quadrangle, which is approximately 60 square miles surrounding the site. The United States Fish and Wildlife Service (USFWS) IPaC Trust Report of Federally Threatened and Endangered species that may occur in or be affected by projects in the same topographic quadrangles was also reviewed (Attachment B). This information was used to identify special-status wildlife and plant species that have been previously documented in the project vicinity or have the potential to occur based on suitable habitat and geographical distribution. Additionally, the CNDDB depicts locations of sensitive habitats.

A field survey was conducted on April 21, 2017. The survey consisted of walking throughout the project site, making observations of current habitat conditions and noting surrounding land use, general habitat types, and plant and wildlife species. The survey included an assessment of the project site and adjacent areas for potentially jurisdictional Waters of the U.S. (a term that includes

wetlands) as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008), special-status species, and suitable habitat for special-status species (e.g., elderberry shrubs, vernal pools). Additionally, trees within and near the work area were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*). Ground squirrel burrows in the area were inspected for burrowing owls (*Athene cunicularia*) or evidence of past occupancy.

Results

GENERAL SETTING: The section of levee proposed for improvements is on Bogg's Tract, in San Joaquin County, California (Figure 1). The site is in an area of unnumbered Sections in Township 1 North, Range 6 East of the USGS 7.5-minute Stockton West topographic quadrangle (Figure 2). The top of the levee is at an elevation of approximately 22 feet above mean sea level; the interior portions of the tract are about 5 feet above sea level.

Surrounding land uses in this portion of San Joaquin County are a mixture of residential, recreation, and open space (Figure 3). The part of Bogg's Tract adjacent to the proposed levee improvement is a golf course. Lands across French Camp Slough from the east end of the project site are residential subdivisions. The French Camp Slough Conservation Bank is located southwest of the northwest part of the site, across French Camp Slough (Figure 3 and photographs in Attachment C).

HABITAT CONDITIONS: There is no vegetation along the gravel road on top of the levee and very little vegetation along the top edges of the levee slopes where work will occur (see photographs in Attachment C). The lower portion of the waterside slope of the levee adjacent to the site is covered with some rock slope protection and supports a sparse and discontinuous fringe of riparian trees and shrubs. The upper levee slopes either lack vegetation or are sparsely vegetated with ruderal grasses and weeds; the levee slopes are also periodically sprayed as part of the District's ongoing levee maintenance program.

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Figure 3

Moore Biological Consultants

0 100 200

1 inch = 200 feet

N
W E
S

AERIAL

French Camp Slough Cut-Off Wall

San Joaquin County, CA

Map Date: 04/24/2017
Aerial Source: Google Earth (2016)

VEGETATION: California annual grassland series (Sawyer and Keeler-Wolf, 1995) best describes the vegetation along the landside levee slope. Grasses including oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), perennial ryegrass (*Lolium perenne*), and foxtail barley (*Hordeum murinum*) are dominant grass species. Other grassland species such as black mustard (*Brassica nigra*), common mallow (*Malva neglecta*), and filaree (*Erodium botrys*) are intermixed with the grasses. Below the elevation of high tide, French Camp Slough supports of tules (*Scirpus acutus*) and cattails (*Typha* sp.) that are sparse or entirely absent adjacent to the east end of the site and expansive and dense further northwest.

There are a few trees along the water side levee slope adjacent to where the work will occur, including valley oak (*Quercus lobata*), coast live oak (*Quercus lobata*), box elder (*Acer negundo*), Fremont cottonwood (*Populus fremontii*), and willows (*Salix* spp.) (Figure 3 and photographs in Attachment C). There are some widely spaced patches of Himalayan blackberry (*Rubus discolor*), willows, and wild rose (*Rosa califorrnica*) along the waterside of the levee. None of this riparian forest and/or scrub-shrub vegetation falls within the work area. There are pines (*Pinus* sp.), redwoods (*Sequoia sempervirens*), and other ornamentals in the golf course. None of the golf course trees fall within the work area.

No blue elderberry shrubs (*Sambucus mexicana*) were observed in or near the project site.

WILDLIFE: A variety of bird species were observed during the recent survey. Turkey vulture (*Cathartes aura*), great egret (*Casmerodias albus*), great blue heron (*Ardea herodias*), black-crowned night-heron (*Nycticorax nycticorax*), Canada goose (*Branta canadensis*), Swainson's hawk, red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), American crow (*Corvus brachyrhynchos*), western kingbird (*Tyrannus verticalis*), mourning dove (*Zenaida macroura*), Brewer's blackbird (*Euphagus cyanocephalus*), and red-winged blackbird (*Agelaius phoeniceus*) are representative bird species observed in and near the site (Table 1).

TABLE 1

WILDLIFE SPECIES OBSERVED AT THE SITE

Birds	
Double-crested cormorant	*Phalacrocorax auritis*
Great blue heron	*Ardea herodias*
Great egret	*Casmerodius albus*
Black-crowned night-heron	*Nycticorax nycticorax*
American coot	*Fulica americana*
Mallard	*Anas platyrhynchos*
Wood duck	*Aix sponsa*
Turkey vulture	*Cathartes aura*
Swainson's hawk	*Buteo swainsoni*
Red-tailed hawk	*Buteo jamaicensis*
Mourning dove	*Zenaida macroura*
Northern flicker	*Colaptes auratus*
Yellow-bellied sapsucker	*Sphyrapicus varius*
Western kingbird	*Tyrannus verticalis*
Black phoebe	*Sayornis nigricans*
Western scrub jay	*Aphelocoma coerulescens*
American crow	*Corvus brachyrhynchos*
American robin	*Turdus migratorius*
Northern mockingbird	*Mimus polyglottos*
Red-winged blackbird	*Agelaius phoeniceus*
White-crowned sparrow	*Zonotrichia leucophrys*
Red-winged blackbird	*Agelaius phoeniceus*
Brewer's blackbird	*Euphagus cyanocephalus*
American goldfinch	*Carduelis tristis*
House finch	*Carpodacus mexicanus*
Mammals	
California ground squirrel	*Spermophilus beecheyi*
Reptiles and Amphibians	
Pacific pond turtle	*Emmys marmorata*
Western fence lizard	*Sceloporus occidentalis*

There are trees along French Camp Slough and surrounding areas that are suitable for nesting raptors and other protected migratory birds, including Swainson's hawk. Swainson's hawks were observed soaring over the site during the survey and are likely nesting in the area. Given the presence of riparian habitats as well as ornamental trees in and near the site, it is likely one or several pairs of raptors and a variety of songbirds nest in and/or near the site during most years. The scrub-shrub and emergent wetland vegetation within and along French Camp Slough provides high quality nesting habitat for numerous birds. It is possible that ground-nesting songbirds such as killdeer and red-winged blackbird nest in the grassland habitats in the site.

A variety of mammals common to riparian and urban areas likely occur in the project site. California ground squirrel (*Spermophilus beecheyi*) was observed during the recent survey; species such as black-tailed hare (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), Virginia opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*) are expected to occur. Based on habitat types present, a limited number of amphibians and reptiles may use habitats in the area. A Pacific (western) pond turtle (*Emys marmorata*) was observed in a golf course pond just north of the site during the recent survey; a western fence lizard (*Sceloporus occidentalis*) was observed along the levee.

WATERS OF THE U.S. AND WETLANDS: Waters of the U.S., including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into any waters of the U.S., including wetlands. ACOE, CDFW, and the California Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to riverbanks, lakes, stream channels and other wetland features.

"Waters of the U.S.", as defined in 33 CFR 328.4, encompasses Territorial Seas, Tidal Waters, and Non-Tidal Waters; Non-Tidal Waters includes interstate and

intrastate rivers and streams, as well as their tributaries. In tidal waters, the limit of federal jurisdiction is high tide. The limit of federal jurisdiction of Non-Tidal Waters of the U.S. extends to the “ordinary high water mark”. The ordinary high water mark is established by physical characteristics such as a natural water line impressed on the bank, presence of shelves, destruction of terrestrial vegetation, or the presence of litter and debris.

Jurisdictional wetlands and Waters of the U.S. include, but are not limited to, perennial and intermittent creeks and drainages, lakes, seeps, and springs; emergent marshes; riparian wetlands; and seasonal wetlands. Wetlands and Waters of the U.S. provide critical habitat components, such as nest sites and a reliable source of water, for a wide variety of wildlife species.

French Camp Slough is a jurisdictional Water of the U.S. subject to Section 404 of the Clean Water Act. The limit of federal jurisdiction is high tide, which is a few feet above mean sea level. This waterway also falls under the jurisdiction of CDFW, RWQCB, and the Central Valley Flood Protection Board (CVFPB). The project will not involve work in French Camp Slough.

Beyond French Camp Slough, no other potentially jurisdictional wetlands or Waters of the U.S. were observed in or adjacent to the project site. There is a pond in the golf course just northeast of the north end of the project site. This pond may be an historical oxbow associated with French Camp Slough but is now separated by the levee and is a managed water feature. Despite its managed nature, the pond may be viewed as a jurisdictional Water of the U.S. by ACOE. There will be no project work in or near this pond.

SPECIAL-STATUS SPECIES: Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California

Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized “take” (i.e., killing) of listed species, with take broadly defined in both acts to include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish.

Special-status plants are those which are designated rare, threatened, or endangered and candidate species for listing by the USFWS. Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act Guidelines, such as those plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2016). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on CNPS List 3.

Table 2 provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat in the project area. This table also includes an assessment of the likelihood of occurrence of each of these species in the site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
PLANTS						
Large-flowered fiddleneck	*Amsinckia grandiflora*	E	E	1B	Cismontane woodland, valley and foothill grassland.	Unlikely: the ruderal grassland habitats along the levee do not provide suitable habitat for large-flowered fiddleneck; the site is also below the elevation range of this species (CNPS, 2016). There are no recorded occurrences of this species in the CNDDB (2017) search area.
Alkali milk-vetch	*Astragalus tener var. tener*	None	None	1B	Alkali vernal pools.	Unlikely: there are no vernal pools in the project vicinity. The nearest occurrence of alkali milk-vetch in the CNDDB (2017) search area is in Smith Canal, approximately 3.5 miles north of the site.
Heartscale	*Atriplex cordulata*	None	None	1B	Valley and foothill grassland, chenopod scrub.	Unlikely: the levee crown does not provide suitable habitat for heartscale. The nearest occurrence of this species in the CNDDB (2017) search area is an historical population mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
San Joaquin spearscale	*Atriplex joaquiniana*	None	None	1B	Chenopod scrub, alkali meadow, valley and foothill grassland.	Unlikely: the levee crown does not provide suitable habitat for this species. The nearest occurrence of San Joaquin spearscale in the CNDDB (2017) search area is an historical population mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
Big tarplant	*Blepharizonia plumosa ssp. plumosa*	None	None	1B	Valley and foothill grassland.	Unlikely: the levee crown does not provide suitable habitat for big tarplant. The nearest occurrence of this species in the CNDDB (2017) search area is an historical population mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
Water shield	*Brasenia schreberi*	None	None	2	Marshes and swamps.	Unlikely: while it occurs in regional delta waterways, the levee slopes above high tide do not contain suitable habitat for this species. The only occurrence of water shield in the CNDDB (2017) search area is an historical population mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Round-leaved filaree	*California macrophyllum*	None	None	2	Cismontane woodland and valley and foothill grassland.	Unlikely: the levee crwon does not provide suitable habitat for this species. The nearest occurrence of round-leaved filaree in the CNDDB (2017) search area is an historical population observed near Stockton; this occurrence is mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
Palmate-bracted salty bird's-beak	*Cordylanthus palmatus*	E	E	1B	Chenopod scrub, valley and foothill grassland.	Unlikely: the levee crown does not provide suitable habitat for this species. The nearest occurrence of palmate-bracted salty bird's-beak in the CNDDB (2017) search area is an historical population observed near Stockton; this occurrence is mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
Wooly rose mallow	*Hibiscus lasiocarpus*	None	None	2	Freshwater marshes and swamps.	Unlikely: the levee crown does not provide suitable habitat for wooly rose mallow. The nearest occurrence of this species in the CNDDB (2017) search area is in the Calaveras River, approximately 4.5 miles northwest of the site.
Delta tule pea	*Lathyrus jepsonii var. jepsonii*	None	None	1B	Marshes and swamps.	Unlikely: the levee crown does not provide suitable habitat for this species. The nearest occurrence of delta tule pea in the CNDDB (2017) search area is an historical population on Rough and Ready Island that is mapped non-specifically approximately 3 miles northwest of the site.
Sanford's arrowhead	*Sagittaria sanfordii*	None	None	1B	Standing or slow moving freshwater ponds, marshes, and ditches.	Unlikely: the levee crown does not provide suitable habitat for this species. The nearest occurrence of Sanford's arrowhead in the CNDDB (2017) search area is an historical population mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
Suisun marsh aster	*Symphotrichum lentum*	None	None	1B	Marshes and swamps.	Unlikely: the levee crown does not provide suitable habitat for this species. The nearest occurrence of this species in the CNDDB (2017) search area is in the Calaveras River, approximately 5 miles northwest of the site.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Saline clover	*Trifolium hydrophilum*	None	None	1B	Marshes and swamps, mesic (wet) areas in valley and foothill grassland, vernal pools.	Unlikely: the levee crown does not provide suitable habitat for this species. The nearest occurrence of saline clover in the CNDDB (2017) search area is an historical population mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
WILDLIFE						
Birds						
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Low: the levee crown and slopes are routinely maintained and there are high levels of activity along the levee and in the golf course. No burrowing owls or burrows with evidence of owl occupancy were observed. There are several occurrences of nesting burrowing owls in the CNDDB (2017) within one to two miles of the site.
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas; foraging habitats include grasslands, annual cropland, and alfalfa fields supporting rodents.	High: annual cropland in the project vicinity provides foraging habitat for and trees along French Camp Slough are suitable for nesting. A pair of Swainson's hawks was observed and may be nesting near the site. There are several records of nesting Swainson's hawks in the CNDDB (2017) within one to two miles of the site.
Tricolored blackbird	*Agelaius tricolor*	None	CE	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Low: the levee crown and slopes are routinely maintained and there are high levels of activity along the levee and in the golf course. Patches of tules, cattails, and scrub-shrub vegetation in French Camp Slough near the project site may provide suitable tricolored nesting habitat. The nearest occurrence of this species in the CNDDB (2017) search area is approximately 3 miles south of the site.
White-tailed kite	*Elanus leucurus*	None	FP	N/A	Herbaceous lowlands with variable tree growth and dense population of voles.	Low: the levee crown and slopes are routinely maintained and there are high levels of activity along the levee and in the adjacent golf course. Large trees in the area are suitable for nesting. The nearest occurrence of white-tailed kite in the CNDDB (2017) search area is approximately 3 miles northeast of the site.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Least Bell's vireo	*Vireo bellii pusillus*	E	E	N/A	Nests in willow thickets and other shrubs, primarily in southern California riparian forests.	Unlikely: while there may be suitable habitat for least Bell's vireo, this species is not known from the area. The nearest occurrence of least Bell's vireo in the CNDDB (2017) search area is an historical population from 1878 mapped non-specifically in downtown Stockton, approximately 3 miles north of the site.
Mammals						
Riparian brush rabbit	*Sylvilagus bachmani riparius*	E	E	N/A	Riparian thickets in Stanislaus and southern San Joaquin Counties.	Unlikely: the levee crown and adjacent areas do not provide suitable habitat for riparian brush rabbit. The levee slopes are sparsely vegetated with ruderal grasses and weeds; the limited patches of scrub-shrub vegetation along the levee are too small and sparse to support this species. There are no recorded occurrences of riparian brush rabbit in the CNDDB (2017) search area.
Reptiles & Amphibians						
Giant garter snake	*Thamnophis gigas*	T	T	N/A	Freshwater marsh and low gradient streams; also adapted to drainage canals and irrigation ditches, primarily for dispersal or migration.	Unlikely: the levee crown does not provide suitable habitat for giant garter snake. Giant garter snake has not been documented in French Camp Slough or in other waterways near the site. The nearest occurrence of this species in the CNDDB (2017) search area is approximately 3 miles northwest of the site.
California tiger salamander	*Ambystoma californiense*	T	T	N/A	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows).	Unlikely: there is no suitable habitat within or near the work areas for California tiger salamander. This species occurs in the transitional bands between the valley floor and foothills and is not known to occur in the delta. The nearest occurrence of California tiger salamander in the CNDDB (2017) search area is an historical population in downtown Stockton, approximately 3 miles north of the site. The site is not within designated critical habitat for California tiger salamander (USFWS, 2005a).

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
California red-legged frog	*Rana aurora draytonii*	T	SC	N/A	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Unlikely: there is no suitable aquatic habitat for California red-legged frog in or near the project site. California red-legged frog is also presumed extinct on the floor of the Central Valley of California. There are no recorded occurrences of this species in the CNDDB (2017) search area. The site is not within designated critical habitat for California red-legged frog (USFWS, 2006).
Western pond turtle	*Emys marmorata*	None	SC	N/A	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.	Moderate: French Camp Slough and some of the ponds in the golf course provide suitable habitat for western pond turtle and a western pond turtle was observed in a golf course pond just north of the site. There are no occurrences of this species recorded in the CNDDB (2017) within the search area.
Fish						
Central Valley steelhead	*Oncorhynchus mykiss*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	None: the project is limited to work on the levee crown. This species occur in regional waterways including the San Joaquin River on a seasonal basis but would not be expected to occur in French Camp Slough due to lack of spawning habitat further upstream. The nearest occurrence of Central Valley steelhead in the CNDDB (2017) search area is approximately 2 miles northwest of the site in the San Joaquin River. The San Joaquin River, which is approximately 1 mile west of the site, is designated critical habitat for Central Valley steelhead (NOAA, 2005).
Winter-run Chinook salmon	*Oncorhynchus tshawytscha*	E	E	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates; currently known only from the Sacramento River system.	None: the project is limited to work on the levee crown. Although historically present, viable populations of winter-run Chinook salmon are currently restricted to the Sacramento River and some of its major tributaries. There are no occurrences of this species recorded in the CNDDB (2017) within the search area.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Spring-run Chinook salmon	*Oncorhynchus tshawytscha*	T	T	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates; native populations currently known only in the Sacramento River system.	None: the project is limited to work on the levee crown. Although historically present, native populations of spring-run Chinook salmon are currently restricted to the Sacramento River and some of its major tributaries; an experimental population was recently introduced in to the San Joaquin River. There are no occurrences of this species recorded in the CNDDB (2017) within the search area.
Fall-run Chinook salmon	*Oncorhynchus tshawytscha*	None	SC	N/A	Deep flowing pools and riffle complexes with adequate spawning substrates within Central Valley drainages.	None: the project is limited to work on the levee crown. This species occurs in Delta waterways on a seasonal basis and may occur in the project vicinity on occasion. There are no occurrences of fall-run Chinook salmon recorded in the CNDDB (2017) search area.
Green sturgeon	*Acipenser medirostris*	T	SC	N/A	Freshwater and saltwater habitats; spawn in freshwater rivers.	None: the project is limited to work on the levee crown. This species may occur in French Camp Slough on an occasional basis and may occur in the project vicinity on occasion. There are no occurrences of green sturgeon recorded in the CNDDB (2017) within the search area.
Delta smelt	*Hypomesus transpacificus*	T	T	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	None: the project is limited to work on the levee crown. This species may occur in French Camp Slough on an occasional basis, although it is more common in the lower delta. There is an occurrence of delta smelt in the CNDDB (2017) in the San Joaquin River approximately 5 miles northwest of the site. The site is within designated critical habitat for delta smelt (USFWS, 1994).
Longfin smelt	*Spirinchus thaleichthys*	None	SC	N/A	Brackish estuarine habitats.	None: the project is limited to work on the levee crown. This species may occur in French Camp Slough on an occasional basis, although it is more common in the lower delta. There is an occurrence of longfin smelt in the CNDDB (2017) in the San Joaquin River approximately 5 miles northwest of the site.

TABLE 2

SPECIAL-STATUS PLANT AND WILDLIFE SPECIES DOCUMENTED OR POTENTIALLY-OCCURRING IN THE PROJECT VICINITY

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Invertebrates						
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	T	None	N/A	Elderberry shrubs, usually in Central Valley riparian habitats.	Unlikely: there are no blue elderberry shrubs in or near the site. There are no occurrences of valley elderberry longhorn beetle recorded in the CNDDB (2017) within the search area.
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools	Unlikely: there are no vernal pools in or near the site. There are no occurrences of vernal pool fairy shrimp recorded in the CNDDB (2017) in the search area. The site is not within designated critical habitat for vernal pool fairy shrimp (USFWS, 2005b).
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools	Unlikely: there are no vernal pools in or near the site. There are no occurrences of vernal pool tadpole shrimp recorded in the CNDDB (2017) within the search area. The site is not within designated critical habitat for vernal pool tadpole shrimp (USFWS, 2005b).

1 T= Threatened; E = Endangered.

2 T = Threatened; E = Endangered; CE = Candidate for Endangered Status; FP = Fully Protected Species; SC=State of California Species of Special Concern.

3 CNPS List 1B includes species that are rare, threatened, or endangered in California and elsewhere; List 2 includes plants that are rare, threatened or endangered in California but are more common elsewhere.

SPECIAL-STATUS PLANTS: Several special-status plants were identified in the CNDDB (2017) search: alkali milk-vetch (*Astragalus tener var. tener*), hearstcale (*Atriplex cordulata var. cordulata*), San Joaquin spearscale (*Atriplex joaquiniana*), big tarplant (*Blepharizonia plumosa ssp. plumosa*), water shield (*Brasenia schreberi*), round-leaved filaree (*California macrophyllum*), palmate-bracted bird's-beak (*Cordylanthus palmatus*), wooly rose mallow (*Hibiscus lasiocarpus*), delta tule pea (*Lathyrus jepsonii var. jepsonii*), Sanford's arrowhead (*Sagittaria sanfordii*), Suisun marsh aster (*Symphotrichum lentum*), and saline clover (*Trifolium hydrophilum*) (Table 2 and CNDDB search results in Attachment B). Palmate-bracted bird's-beak and large-flowered fiddleneck (*Amsinckia grandiflora*) are on the USFWS IPaC Trust Report Species List.

Special-status plants generally occur in relatively undisturbed areas and are largely found within unique vegetation communities such as vernal pools, marshes and swamps, and areas with unique soils. Based on the ongoing levels of disturbance from development, levee maintenance, and fire suppression, it is unlikely any listed, candidate, or other special-status species occur in the project site. Most of the species listed in Table 2 occur in marshes and swamps or riparian woodlands. Water shield, wooly rose mallow, delta tule pea, Sanford's arrowhead, Suisun marsh aster, and saline clover are recorded in the CNDDB (2017) growing in the waterways in the greater project vicinity. These species may occur in French Camp Slough below the water line, but would not occur in upland habitats on the levee crown and upper levee slopes where the proposed levee improvements will be constructed.

The remaining species occur in habitat types such as riparian scrub, chenopod scrub, vernal pools, relatively undisturbed valley and foothill grassland; none of these habitat types are present within the footprint of the proposed improvements or in the soil stockpile area. Heartscale, San Joaquin spearscale, big tarplant, round-leaved filaree, and palmate-bracted bird's beak occur in grassland, cismontane woodland, or chenopod scrub habitats. The disturbed upland

grassland on the edges of the levee crown and slopes is routinely mowed and/or sprayed. This highly disturbed upland grassland habitat does not provide suitable habitat for special-status plants. Alkali milk-vetch is a vernal pool species; there are no vernal pools in or near the project site.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the work areas by special-status wildlife species is also generally considered low. Special-status wildlife species recorded in greater project vicinity in the CNDDB (2017) include burrowing owl, Swainson's hawk, tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), least Bell's vireo (*Vireo bellii pusillus*), California black rail (*Laterallus jamaicensis coturniculus*), giant garter snake (*Thamnophis gigas*), California tiger salamander (*Ambystoma californiense*), Pacific (western) pond turtle (*Emys marmorata*), Central Valley steelhead (*Oncorhynchus mykiss irrideus*), delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Although not included in the CNDDB within the search area, riparian brush rabbit (*Sylvilagus bachmani riparius*), California red-legged frog (*Rana aurora draytonii*), vernal pool tadpole shrimp (*Lepidurus packardi*), and vernal pool fairy shrimp (*Branchinecta lynchi*) are in the USFWS IPaC Trust Resource Report (Attachment B). Finally, Chinook salmon (*Oncorhynchus tshawytscha*) and green sturgeon (*Acipenser medirostris*) were added to Table 2 as these fish could potentially occur in French Camp Slough.

Swainson's hawk, burrowing owl, tricolored blackbird, white-tailed kite, least Bell's vireo, and other bird species protected by the Migratory Bird Treaty Act and/or other laws, have potential to occur in or near the site and could be adversely affected by site construction if they nested in or near the site during construction. Central Valley steelhead, and the other fish in Table 2 could potentially occur in French Camp Slough adjacent to the project site.

As mentioned above, Pacific pond turtle was observed basking on a log in a golf course pond just north of the site during the recent survey. Pond turtles could potentially occur in French Camp Slough and could potentially nest in grasslands in or near the site.

While French Camp Slough provides potentially suitable aquatic habitat for giant garter snake, the levee crown and upper levee slopes do not provide suitable habitat for this species. Giant garter snake is has also not been documented in French Camp Slough or in other waterways near the site and is not known to occur in this part of the delta.

The project site does not provide suitable habitat for the remaining species in Table 2. For example, there are no vernal pools or seasonal wetlands in the site for vernal pool fairy shrimp or vernal pool tadpole shrimp. While the cattails and tules in nearby French Camp Slough provide high-quality tricolored blackbird nesting habitat, there is no emergent wetland habitat in the site for this species to nest. The site does not provide suitable aquatic habitat for California tiger salamander, or California red-legged frog. There are no blue elderberry shrubs in the site, precluding the potential occurrence of valley elderberry longhorn beetle.

CRITICAL HABITAT: The project site is designated critical habitat for delta smelt (USFWS, 1994) (Attachment D). Delta smelt critical habitat includes entire delta islands and the waterways where this fish actually occurs. Work on upland portions of the levee should have no effect on off-site waterways and no effect on the suitability of delta waterways for delta smelt. The project site is not within designated critical habitat of Central Valley steelhead (NOAA, 2005) or any other federally listed species.

Avoidance and Minimization Measures

The following avoidance and minimization measures will be incorporated into the project to reduce the potential for impacts to jurisdictional Waters of the U.S., special-status species, and potential or actual habitats of special-status species:

- Avoid impacts to potentially jurisdictional Waters of the U.S. and wetlands by restricting all work to the levee crown and upper levee slopes, as proposed.

- In order to avoid take of protected raptors and migratory birds between February 1 and August 31, an initial pre-construction nest survey shall be conducted by a CDFW approved biologist. The survey shall be conducted within fifteen (15) days prior to the beginning of construction activities in order to identify active nests within five hundred feet (500 ft.) of the project work areas and as to raptors' active nests within a quarter mile (1320 ft.) of the project work areas. The surveys shall incorporate methodologies from CDFW's 1994 Staff Report regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California (CDFW, 1994) and the Swainson's Hawk Technical Advisory Committee (SHTAC) survey guidelines (SHTAC, 2000). If active raptor nests are found within 1320 feet of the work area or other active nests within 500 feet of the work area, a temporary buffer of 1320 feet and 500 feet respectively shall be established and an on-site biologist/monitor experienced with raptor behavior shall be retained by the District. The biologist shall monitor the nest(s) and consult with the CDFW to determine the buffers to be applied and best course of action to avoid nest abandonment or take of individuals. The necessity and extent for temporal construction restrictions shall be determined by CDFW. CDFW may determine it is necessary for a designated biologist/monitor to be on-site daily while construction-related activities are within or near buffer areas. The on-site

biologist/monitor shall have authority to stop work if raptors are exhibiting agitated behavior such as defensive flights at intruders, unusual getting up from a brooding position or unusual flying off the nest. If during the nesting season there is a lapse in project-related work of fifteen (15) days or longer, another focused survey shall be performed and the results sent to CDFW prior to resuming work.

- Preconstruction surveys for burrowing owl shall be undertaken for construction activities between February 1 and August 31. The surveys shall incorporate methodologies from CDFW's 2012 Staff Report on Burrowing Owl Mitigation and the California Burrowing Owl Consortium CBOC) Burrowing Owl Survey Protocol and Mitigation Guidelines (CBOC, 1993). In the event that nesting owls are located within 250 feet of the work areas, temporal construction restrictions may be necessary to eliminate the potential for noise disturbance to the burrowing owls. The necessity and extent for temporal construction restrictions as to nesting burrowing owls is dependent upon location of the nest with respect to construction and shall be determined by CDFW as described above.

- Trees and shrubs within the work area could be used by other birds protected by the Migratory Bird Treaty Act of 1918. The grasslands may be used by ground-nesting species. Any vegetation removal during the avian nesting season (February 1 through August 31) shall be immediately preceded by a survey. If active nests are found, adequate marking of the nest site shall be provided and vegetation removal in the vicinity of the nest shall be delayed until the young fledge.

- For construction in the non-nesting season (i.e., for construction between September 1 to January 31), the District shall consult with CDFW regarding the appropriate pre-construction surveys, and

avoidance and minimization measures.

- Pacific Pond Turtles (PPT), formerly Western Pond Turtle, may be present in the project area. If a PPT is observed, it should be left alone to move out of the area on its own or may be relocated by a qualified biologist to a suitable aquatic habitat outside of the work area. The District shall exercise measures to avoid direct injury to PPT, as well as measures to avoid areas where they are observed to occur.

- Pre-construction surveys for PPT and their nests will be conducted for construction between April 1 through October 31. This will involve a search for nests in uplands on the landside of the levees. If nest sites are located, the District will notify CDFW and a 50-foot buffer area around the nest shall be staked and work will be delayed until hatching is complete and the young have left the nest site.

- A biological worker awareness training program shall be implemented to educate the construction crews of the biological diversity within the project area. The worker awareness program shall include a presentation on the life history and legal status of potentially occurring special-status species and distribution of informational packages to each worker. While all of the species in Table 2 will be at least briefly addressed, the focal species of the worker awareness training program will be Swainson's hawk, burrowing owl, and Pacific pond turtle.

- A copy of the District's Biological Avoidance and Minimization Measures will be kept on site for reference during the duration of the project.

The collective implementation of these measures as a part of the project will assure the protection of sensitive habitat and species and the maintenance of biological functions and values.

Thank you, again, for asking Moore Biological Consultants to assist with the project. Please feel free to call me at (209) 745-1159 with any questions.

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

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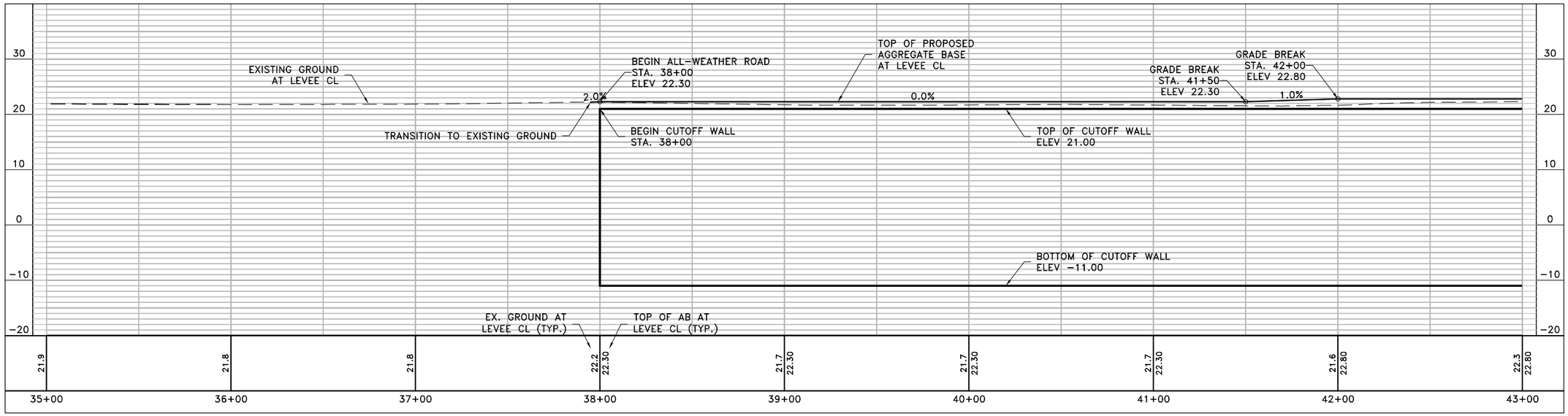
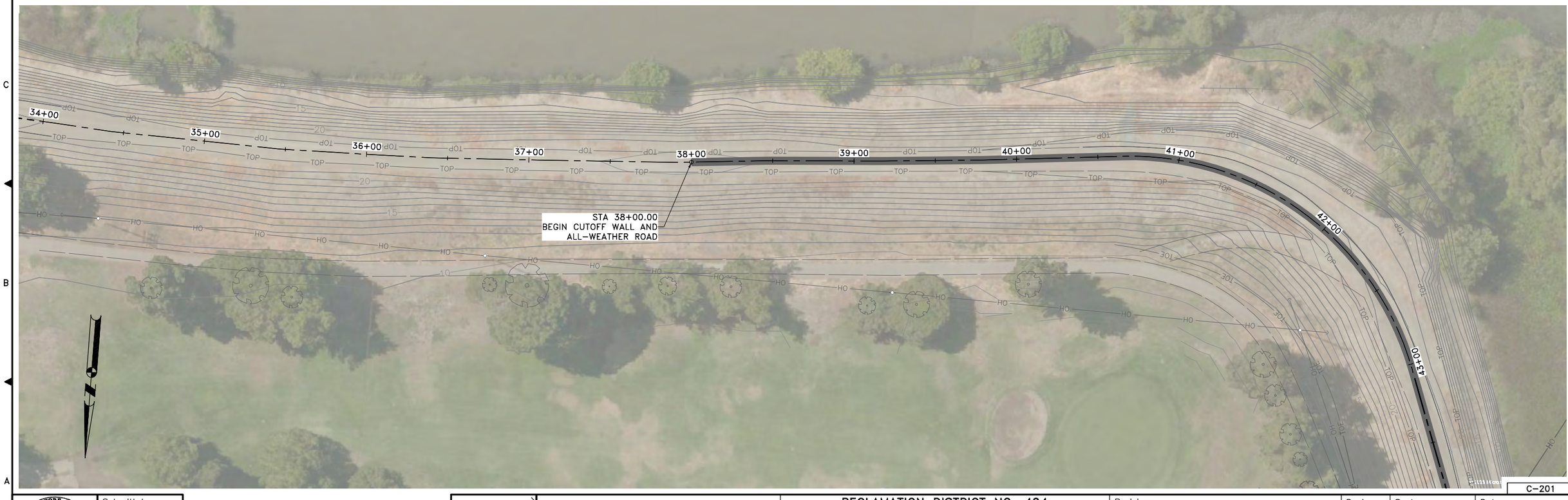
Attachment A

Project Plans (Sheets 5, 6 & 10)





C-201

FILE SPEC: P:\2035_Boggs_Tract\0180_2014 Cutoff Wall_French Camp Slough\05_Civil\CAD\Sheets\C-201.dwg
PLOT DATE: Feb 29, 2016 - 3:58pm

CALL BEFORE YOU DIG 1-800-227-2600 UNDERGROUND SERVICE ALERT

Submittal	
%	Date
65	2/29/2016
15	8/27/2015

PROJECT ENGINEER

NOT FOR CONSTRUCTION

KSN INC. KJELDSEN SINNOCK NEUDECK
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Stockton, CA 95203
209-946-0268
1355 Halyard Drive, Suite 100
West Sacramento, CA 95691
916-403-5900
www.ksninc.com

RECLAMATION DISTRICT NO. 404
FRENCH CAMP SLOUGH CUTOFF WALL
STOCKTON, CALIFORNIA

PLAN & PROFILE
STA. 38+00 TO 43+00

Revisions				
No.	Description	Date	By	Aprvd. By

Design	EEA
Drawn	EEA
Check	CHN

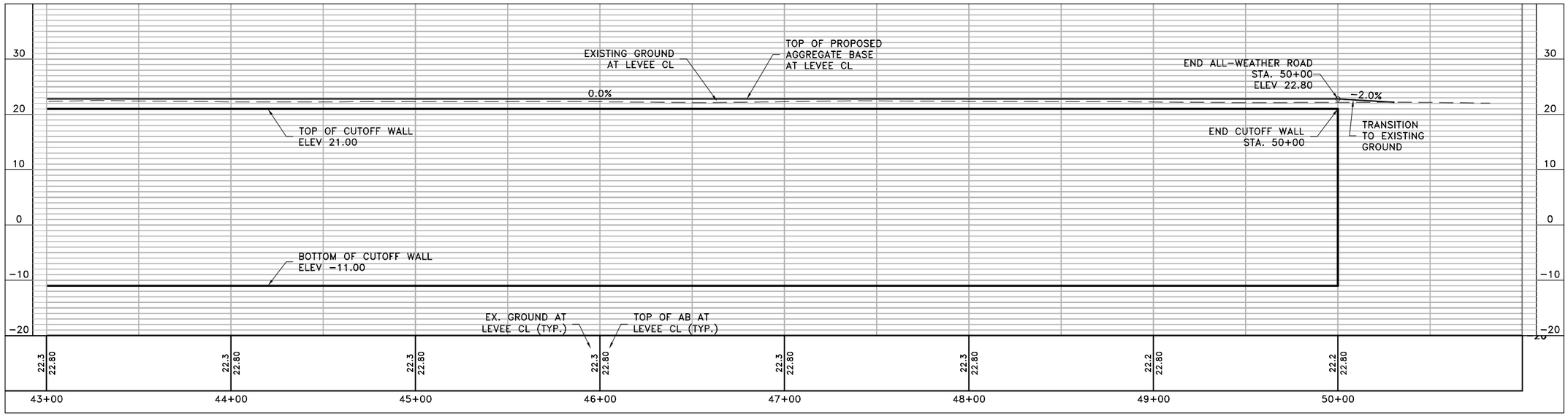
Scale
HORIZ: 1" = 30'
VERT: 1" = 10'

Original Drawing Scale
0 ½" 1"

Date
FEBRUARY 2016

Sheet Number
5 Of 10

Project File No.
2035-0180



CALL BEFORE YOU DIG
800 227 2600 ALERT
UNDERGROUND SERVICE

Submittal	
%	Date
65	2/29/2016
15	8/27/2015

PROJECT ENGINEER
NOT FOR CONSTRUCTION

KSN INC. KJELDSEN SINNOCK NEUDECK
Civil Engineers and Land Surveyors
711 N Pershing Avenue
Stockton, CA 95203
209-946-0268
1355 Halyard Drive, Suite 100
West Sacramento, CA 95691
916-403-5900
www.ksninc.com

RECLAMATION DISTRICT NO. 404
FRENCH CAMP SLOUGH CUTOFF WALL
STOCKTON, CALIFORNIA

PLAN & PROFILE
STA. 43+00 TO 50+00

Revisions				
No.	Description	Date	By	Aprvd. By

Design EEA
Drawn EEA
Check CHN

Scale
HORIZ: 1" = 30'
VERT: 1" = 10'
Original Drawing Scale 0 ½" 1"

Date FEBRUARY 2016
Sheet Number 6 Of 10
Project File No. 2035-0180

C-202

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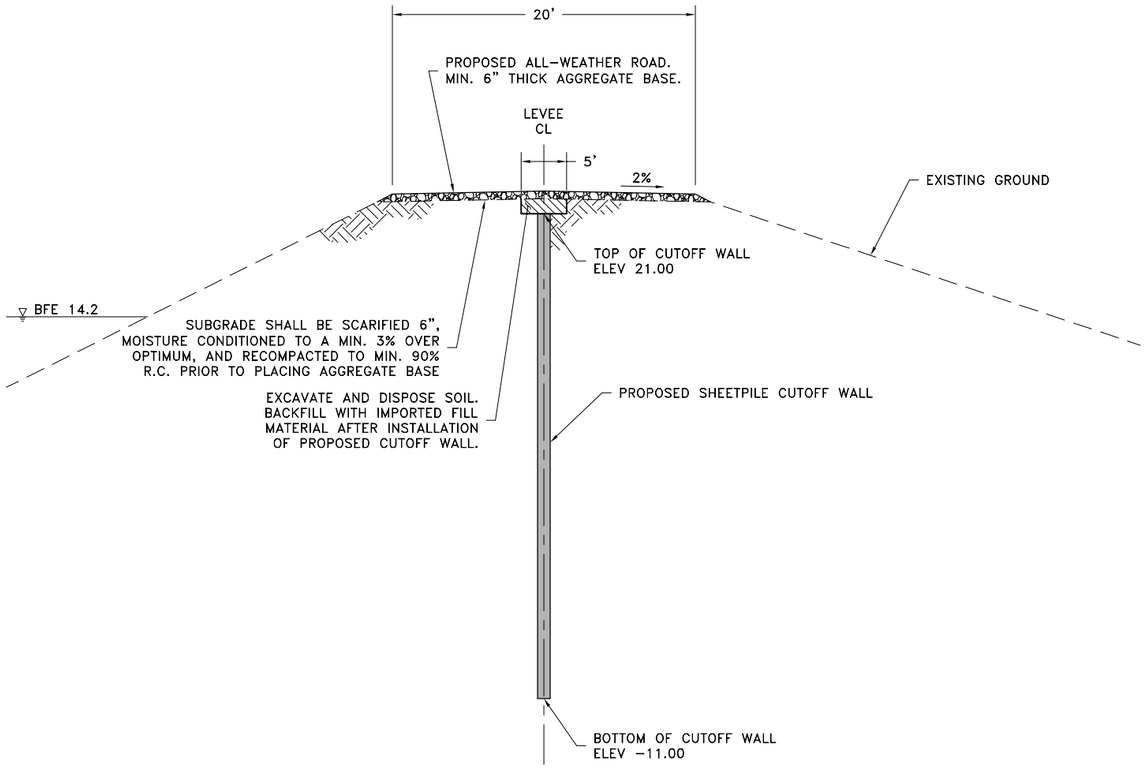
PLOT DATE: Feb 29, 2016 - 3:59pm



1 CUTOFF WALL

SCALE: N.T.S.

FILE SPEC: P:\2035_Boggs_Tract\0180_2014 Cutoff Wall_French Camp Slough\05_Civil\CAD\Sheets\C-501.dwg
PLOT DATE: Jul 27, 2016 - 3:09pm

CALL BEFORE YOU DIG
811 UNDERGROUND SERVICE ALERT

Submittal	
%	Date
65	2/29/2016
15	8/27/2015

PROJECT ENGINEER
NOT FOR CONSTRUCTION

KSN INC. KJELDSEN SINNOCK NEUDECK
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916-403-5900
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RECLAMATION DISTRICT NO. 404
FRENCH CAMP SLOUGH CUTOFF WALL
STOCKTON, CALIFORNIA

DETAILS

Revisions				
No.	Description	Date	By	Aprvd. By

Design EEA
Drawn EEA
Check CHN

Scale AS SHOWN
Original Drawing Scale 0 ½" 1"

Date FEBRUARY 2016
Sheet Number 10 Of 10
Project File No. 2035-0180

C-501

Attachment B

USFWS IPaC Trust Report Species List &

CNDDB Summary Report and Exhibits

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Stockton West (3712183))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T2	S2	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G2	S2	1B.1
Brasenia schreberi watershield	PDCAB01010	None	None	G5	S3	2B.3
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
California macrophylla round-leaved filaree	PDGER01070	None	None	G3?	S3?	1B.2
Chloropyron palmatum palmate-bracted salty bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hypomesus transpacificus Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	
Lathyrus jepsonii var. jepsonii Delta tule pea	PDFAB250D2	None	None	G5T2	S2	1B.2
Oncorhynchus mykiss irideus steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Record Count: 22

Mason's lilaeopsis
Mason's lilaeopsis
Mason's lilaeopsis
Suisun Marsh aster
woolly rose-mallow
woolly rose-mallow
woolly rose-mallow
alkali milk-vetch
Sanford's arrowhead
saline clover
watershield
big tarplant
heartscale palmate-bracted salty bird's-beak
round-leaved filaree
San Joaquin spearscale
Delta tule pea
Project Site

CNDDB Plant

French Camp Slough Cut-Off Wall

San Joaquin County, CA

Map Date: 04/24/2017; Source: CDFW

N

0 0.25 0.5

Miles

CNDDB Wildlife

French Camp Slough Cut-Off Wall

San Joaquin County, CA

Map Date: 04/24/2017; Source: CDFW

Project Site

N

0 0.25 0.5

Miles

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.

Location

San Joaquin County, California

Local offices

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

San Francisco Bay-delta Fish And Wildlife

(916) 930-5603
(916) 930-5654

650 Capitol Mall
Suite 8-300
Sacramento, CA 95814

http://kim_squires@fws.gov

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. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Endangered Species 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:

Amphibians

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

Crustaceans

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

Fishes

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

Flowering Plants

NAME	STATUS
Large-flowered Fiddleneck Amsinckia grandiflora There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/5558	Endangered

Palmate-bracted Bird's Beak Cordylanthus palmatus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1616	Endangered

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Mammals

NAME	STATUS
Riparian Brush Rabbit Sylvilagus bachmani riparius No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6189	Endangered

Reptiles

NAME	STATUS
Giant Garter Snake Thamnophis gigas No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	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
Delta Smelt Hypomesus transpacificus https://ecos.fws.gov/ecp/species/321#crithab	Final designated
Steelhead Oncorhynchus (=Salmo) mykiss https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead Oncorhynchus (=Salmo) mykiss https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead Oncorhynchus (=Salmo) mykiss https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead Oncorhynchus (=Salmo) mykiss https://ecos.fws.gov/ecp/species/1007#crithab	Final designated
Steelhead Oncorhynchus (=Salmo) mykiss https://ecos.fws.gov/ecp/species/1007#crithab	Final designated

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

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 Service[3]. 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.

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
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. 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 view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Allen's Hummingbird Selasphorus sasin https://ecos.fws.gov/ecp/species/9637	Migrating
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	Year-round
Black Rail Laterallus jamaicensis https://ecos.fws.gov/ecp/species/7717	Breeding
Burrowing Owl Athene cunicularia https://ecos.fws.gov/ecp/species/9737	Year-round
Costa's Hummingbird Calypte costae https://ecos.fws.gov/ecp/species/9470	Year-round
Fox Sparrow Passerella iliaca	Wintering
Least Bittern Ixobrychus exilis https://ecos.fws.gov/ecp/species/6175	Breeding
Lesser Yellowlegs Tringa flavipes https://ecos.fws.gov/ecp/species/9679	Wintering
Lewis's Woodpecker Melanerpes lewis https://ecos.fws.gov/ecp/species/9408	Wintering
Loggerhead Shrike Lanius ludovicianus https://ecos.fws.gov/ecp/species/8833	Year-round
Long-billed Curlew Numenius americanus https://ecos.fws.gov/ecp/species/5511	Wintering
Marbled Godwit Limosa fedoa https://ecos.fws.gov/ecp/species/9481	Wintering
Mountain Plover Charadrius montanus https://ecos.fws.gov/ecp/species/3638	Wintering
Nuttall's Woodpecker Picoides nuttallii https://ecos.fws.gov/ecp/species/9410	Year-round
Oak Titmouse Baeolophus inornatus https://ecos.fws.gov/ecp/species/9656	Year-round

Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	Wintering
Rufous Hummingbird selasphorus rufus https://ecos.fws.gov/ecp/species/8002	Migrating
Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	Wintering
Swainson's Hawk Buteo swainsoni https://ecos.fws.gov/ecp/species/1098	Breeding
Tricolored Blackbird Agelaius tricolor https://ecos.fws.gov/ecp/species/3910	Year-round
Western Grebe aechmophorus occidentalis https://ecos.fws.gov/ecp/species/6743	Wintering
Williamson's Sapsucker Sphyrapicus thyroideus https://ecos.fws.gov/ecp/species/8832	Year-round
Yellow-billed Magpie Pica nuttalli https://ecos.fws.gov/ecp/species/9726	Year-round

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

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:

FRESHWATER EMERGENT WETLAND
- PEMS
- PEMR
- PEMT
- PEMF
- PEMC
- PEMA

FRESHWATER FORESTED/SHRUB WETLAND
- PFOR
- PSSC
- PSSR

FRESHWATER POND
- PUBHx
- PUBKx
- PABHx
- PUBFx

LAKE
- L1UBKx

OTHER
- Pf
- PUSCx

RIVERINE
- R1UBV
- R1UBT

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 tuberficid 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.

Attachment C

Photographs

Levee crown and slopes at the east end of the project site, looking west from Station 38+00; 04/21/17.

Waterside levee slope at the east end of the project site, looking west from Station 38+00; 04/21/17.

Landside levee slope at the east end of the project site, looking west from Station 38+00; 04/21/17. The Van Buskirk Golf Course is located just north of the levee.

French Camp Slough adjacent to Station 38+00, looking south from the levee; 04/21/17. There are residential subdivisions across French Camp Slough from the east end of the site.

Levee crown and slopes in the central part of the project site, looking northwest from Station 43+50; 04/21/17.

Waterside levee slope in the central part of the project site, looking northwest from Station 43+50; 04/21/17.

Landside levee slope in the central part of the project site, looking northwest from Station 43+50; 04/21/17. The Van Buskirk Golf Course is located just northeast of the levee.

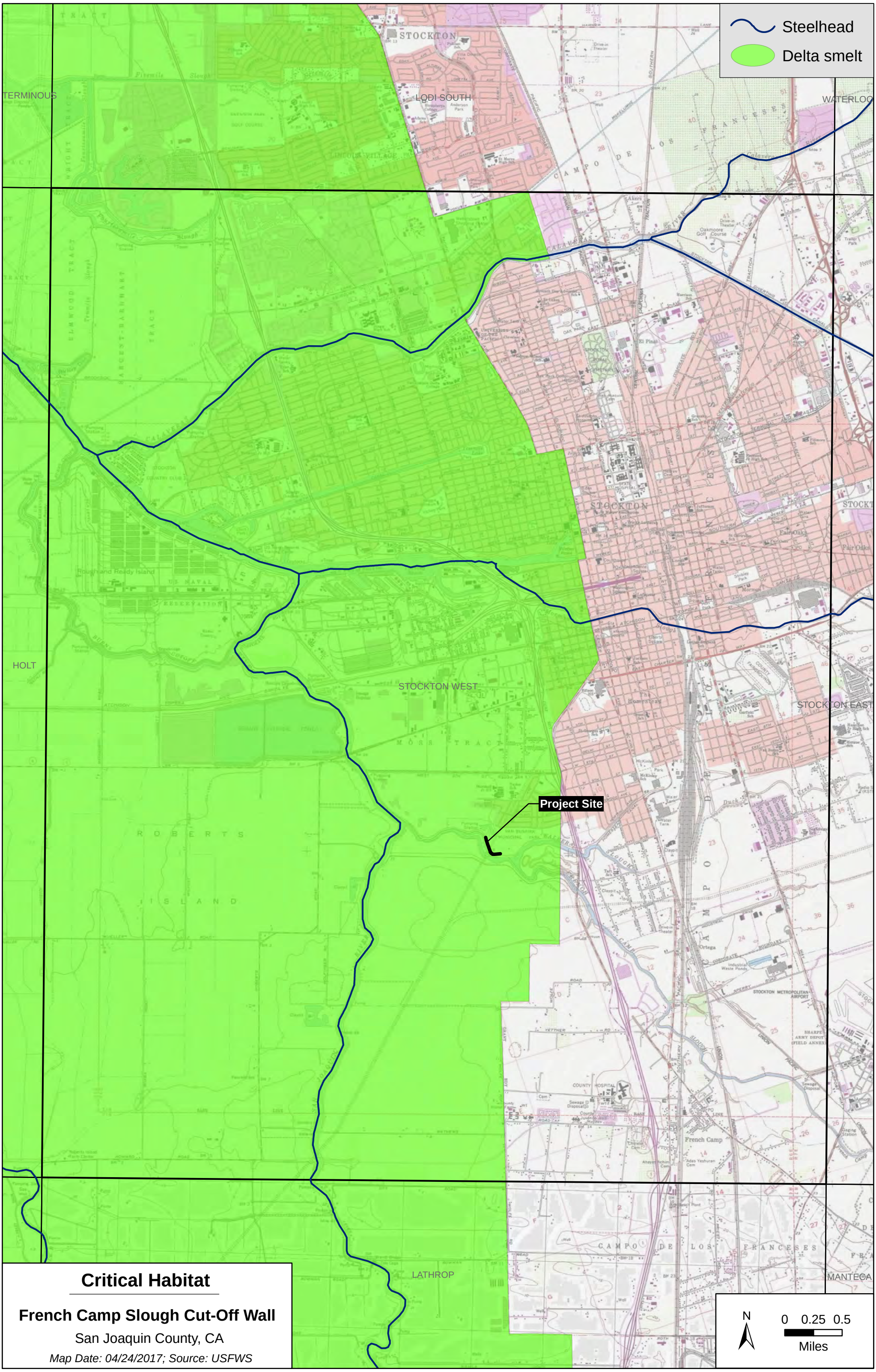
French Camp Slough adjacent to Station 43+50, looking southwest from the levee; 04/21/17. There is a conservation bank across French Camp Slough from the northwest end of the site.

Trees in the golf course adjacent to the levee that have died, looking northeast from Station 48+50; 04/21/17. Saturated soil from seepage likel contributed to these trees dying.

Pacific pond turtle in the golf course pond northeast of the northeast end of the site, looking northeast from Station 52+00; 04/21/17.

Attachment D

Designated Critical Habitat



Critical Habitat

French Camp Slough Cut-Off Wall

San Joaquin County, CA

Map Date: 04/24/2017; Source: USFWS

APPENDIX C
ARCHAEOLOGICAL INVENTORY SURVEY

ARCHAEOLOGICAL INVENTORY SURVEY

French Camp Levee Repair Project
circa 1,100' linear corridor
San Joaquin County, California.

Prepared for

Basecamp Environmental
115 South School Street, Suite 14
Lodi, CA 95240

Author

Sean Michael Jensen, M.A.

And

Asher Levin, B.A.

Keywords *for Information Center Use:*
Archaeological Inventory Survey, circa 1,100' linear corridor, San Joaquin County, CEQA/NHPA, USGS French Camp, Ca. 7.5' Quadrangle, No Significant Historical Resources, No Unique Archaeological Resources, No Historic Properties

January 15, 2017

GENESIS SOCIETY

ARCHAEOLOGICAL - HISTORICAL - CULTURAL RESOURCE MANAGEMENT SERVICES

ABSTRACT

This report details the results of an archaeological inventory survey of a linear corridor extending approximately 1,100 feet in length along a segment of levee adjacent to the north side of Walker Slough, situated approximately ¼-mile west of Interstate 5, immediately south of the Van Buskirk Municipal Golf Course, within the community of French Camp, in San Joaquin County, California.

Reclamation District (RD) 404 proposes the installation of cutoff walls in approximately 1,100 feet of the existing levee, minor excavation of the levee top and resurfacing of the levee-top road to provide all-weather access. It is anticipated that all cutoff wall work will be accomplished from the levee top and will involve no work on the waterside of the levee and no work below the Mean High Water line. The subject levee is a Corps Project levee, which is also a State Plan of Flood Control facility.

Existing records at the CCIC document that all of the present APE had been subjected to previous archaeological investigation, and that no prehistoric, or historic-era sites have been documented within the APE. As well, the present effort included an intensive-level pedestrian survey. No historic properties were identified during the present survey.

An information request letter was delivered to the NAHC on October 20, 2016. To date, no response has been received from the NAHC. As no prehistoric cultural material was identified during either the records search or pedestrian survey, no additional consultation was undertaken.

Based on the absence of significant historical resources/unique archaeological resources/historic properties within the APE, archaeological clearance is recommended for the project/undertaking as presently proposed.

CONTENTS

ATTACHMENTS

1. INTRODUCTION

Project Background

This report details the results of an archaeological inventory survey of a linear corridor extending approximately 1,100 feet in length along a segment of levee adjacent to the north side of Walker Slough, situated approximately ¼-mile west of Interstate 5, immediately south of the Van Buskirk Municipal Golf Course, within the community of French Camp, in San Joaquin County, California.

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Since the project will involve physical disturbance to ground surface and sub-surface components in conjunction with erosion repair, it has the potential to impact cultural resources that may be located within the area of potential effects (APE). In this case, the APE would consist of the circa 1,100' linear corridor area comprising the levee modification area. Evaluation of the project's potential to impact cultural resources must be undertaken in conformity with San Joaquin County rules and regulations, and in compliance with requirements of the California Environmental Quality Act of 1970, Public Resources Code, Section 21000, et seq. (CEQA), and The California CEQA Environmental Quality Act Guidelines, California Administrative Code, Section 15000 et seq. (Guidelines as amended).

Additionally, since the project will or may involve review by one or more federal agencies, the project must also conform with federal guidelines for assessing effects to cultural resources, including in particular Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800), Section 2(b) of Executive Order 11593, Section 101(b)(4) of the National Environmental Policy Act, the Archaeological Resources Protection Act, and other rules and regulations.

Scope of Work

Compliance with CEQA requires completion of projects in conformity with Section 15064.5 of the amended CEQA Guidelines and other Sections. Compliance with Section 106 of the NHPA requires completion of projects in conformity with the standards, guidelines, and principles in the Advisory Council's Treatment of Archaeological Properties: A Handbook (1980), and Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (1983). Based on CEQA and NEPA requirements, the following specific tasks were considered an adequate and appropriate Scope of Work for this project:

- Conduct a records search at the Central California Information Center of the California Historical Resources Information System and consult with the Native American Heritage Commission and interested Native American representatives. The goals of the records

search and consultation are to determine (a) the extent and distribution of previous archaeological surveys, (b) the locations of known archaeological sites and any previously recorded archaeological districts, and (c) the relationships between known sites and environmental variables. This step is designed to ensure that, during subsequent field survey work, all significant/eligible cultural resources are discovered, correctly identified, fully documented, and properly interpreted.

- Conduct a pedestrian survey of the APE in order to record and evaluate any previously unidentified cultural resources. Based on map review, a complete coverage, intensive survey was considered appropriate, given the presence of moderate to high archaeological sensitivity within the property. The purpose of the pedestrian survey is to ensure that any previously identified sites are re-located and evaluated in relation to the present project/undertaking. For any previously undocumented sites discovered, the field survey would include formally recording these resources on State of California DPR-523 Forms.

- Upon completion of the records search and pedestrian survey, prepare a Final Report that identifies project effects and recommends appropriate mitigation measures for sites that might be affected by the undertaking and that are considered significant or potentially significant per CEQA, and/or eligible or potentially eligible for inclusion on the National Register of Historic Places.

The remainder of the present document constitutes the Final Report for this project, detailing the results of the records search, consultation and pedestrian survey and providing recommendations for treatment of significant/eligible archaeological and historic sites. All field survey work followed guidelines provided by the State Historic Preservation Office (Sacramento) and conforms to accepted professional standards.

2. Location, Environmental and Cultural Context

Location

The proposed APE is situated immediately north of Walker Slough and the City of Stockton's Van Buskirk golf course. The APE is located within a portion of the Rancho Del Campo De Los Franceses, in Township 1 North, Range 6 East as shown on the USGS Stockton West, California, 7.5' Series Quadrangle (see attached ***Project Location Map***).

Environment

Situated within the central San Joaquin Valley, the APE occupies flat terrain forming the western bank of the San Joaquin River, which was subjected to agricultural development during the latter portion of the 19th century and throughout the 20th century, and which has been subjected to ongoing agricultural development through the present. Elevation within the APE averages approximately 35 feet above mean sea level.

Generally, environmental conditions within the Central Valley have remained stable throughout the past 8-10,000 years, although minor fluctuations in overall precipitation and

temperature regime have been documented, and these undoubtedly influenced prehistoric patterns of land use and settlement.

Prehistory

The San Joaquin Valley area generally has a long and complex cultural history with distinct regional patterns that extends back more than 11,000 years. The first generally agreed-upon evidence for the presence of prehistoric peoples in the area is represented by the distinctive fluted spear points (e.g. Heizer 1938), some resembling Clovis Points, found on the margins of extinct lakes in the San Joaquin Valley. The Clovis points are found on the same surface with the bones of extinct animals such as mammoths, sloths, and camels. Based on evidence from elsewhere, the ancient hunters who used these spear points existed during a narrow time range between about 10,900 BP and 11,200 BP (Moratto 2004).

The next cultural period represented, the Western Pluvial Lakes Tradition and thought by most to be subsequent to the Clovis period, is another widespread complex that is characterized by stemmed spear points. This poorly defined early cultural tradition is regionally known from a small number of sites in the Central Coast Range, San Joaquin Valley lake margins, and Sierra Nevada foothills. The cultural tradition is dated to between about 8,000 and 10,000 years ago and its practitioners may be the precursors to the subsequent cultural pattern (Wallace 1978c).

About 8,000 years ago, many California cultures shifted the main focus of their subsistence strategies from hunting to seed gathering as evidenced by the increase in food-grinding implements found in archeological sites dating to this period. This cultural pattern is best known for southern California, where it has been termed the Milling Stone Horizon (Wallace, 1954, 1978a). However, subsequent research suggests that the horizon may be more widespread than originally described and likely extended throughout the Valley (Moratto 2004); radiocarbon dates suggest a maximum age range between about 8,000 and 2,000 BP, but with most clustering between about 6,000 to 4,000 BP.

Cultural patterns as reflected in the archeological record, particularly specialized subsistence practices, became codified within the last 3,000 years. The archeological record becomes more complex, as specialized adaptations to locally available resources were developed and populations expanded. Many sites dated to this time period contain mortars and pestles and/or are associated with bedrock mortars implying the intense exploitation of the acorn. The range of subsistence resources utilized along with regional exchange systems expanded significantly. Along the coast and in the Central Valley, archeological evidence of social stratification and craft specialization is indicated by well-made artifacts such as charmstones and beads, often found as mortuary items. Ethnographic lifeways serve as good analogs for this period.

Ethnography

As noted above, the project area is located within land claimed by the Penutian-speaking Yokuts at the time of initial contact with European American populations *circa*. A.D. 1850 (Kroeber 1925:474-573; Wallace 1978: Figure 1). The Yokuts occupied an area extending

from the crest of the Coast "Diablo" Range easterly into the foothills of the Sierra Nevada, north to the American River, and south to the upper San Joaquin River.

The basic social unit for the Yokuts was the family, although the village may also be considered a social, as well as a political and economic, unit. Villages were often located on flats adjoining streams, and were inhabited mainly in the winter as it was necessary to go out into the hills and higher elevation zones to establish temporary camps during food gathering seasons (i.e., spring, summer and fall). Villages typically consisted of a scattering of small structures, numbering from four or five to several dozen in larger villages, each house containing a single family of from three to seven people. Larger villages, with from twelve to fifteen or more houses, might also contain an earth lodge.

As with most California Indian groups, economic life for the Yokuts revolved around hunting, fishing and the collecting of plant foods, with deer, acorns, avian, and aquatic resources representing primary staples. The collection and processing of these various food resources was accomplished with the use of a wide variety of wooden, bone and stone artifacts. The Yokuts were very sophisticated in terms of their knowledge of the uses of local animals and plants, and of the availability of raw material sources which could be used in manufacturing an immense array of primary and secondary tools and implements. However, only fragmentary evidence of their material culture remains, due in part to perishability, and in part to the impacts to archaeological sites resulting from later (historic) land uses.

Historic Context

Interior California was initially visited by Anglo-American fur trappers, Russian scientists, and Spanish-Mexican expeditions during the early part of the 19th Century. These early explorations were followed by a rapid escalation of European-American activities, which culminated in the massive influx fostered by the discovery of gold at Coloma in 1848.

Early Spanish expeditions arrived from Bay Area missions as early as 1804, penetrating the northwestern San Joaquin Valley (Cook 1976). By the mid-1820s, hundreds of fur trappers were annually traversing the Valley on behalf of the Hudson's Bay Company (Maloney 1945). By the late 1830s and early 1840s, several small permanent European-American settlements had emerged in the Central Valley and adjacent foothill lands, including Ranchos in the interior Coast Range, and of course the settlement at New Helvetia (Sutter's Fort) at the confluence of the Sacramento and American Rivers (Sacramento).

With the discovery of gold in the Sierra Nevada, large numbers of European-Americans, Hispanics, and Chinese arrived in and traveled through the Valley. The Valley's east-side mining communities' demands for hard commodities led quickly to the expansion of ranching and agriculture throughout the Great Central Valley and the interior valleys of the Coast Range. Stable, larger populations arose and permanent communities slowly emerged in the Central Valley, particularly along major transportation corridors. Of particular importance in this regard was the transformation brought about by the railroads.

The Southern Pacific and Central Pacific Railroads and a host of smaller interurban lines to the north and east around the cities of Sacramento, Stockton and Modesto began intensive projects in the late 1860s. By the turn of the century, nearly 3,000 miles of lines connected

the cities of Modesto and Stockton with points south and north. Many of the valley's cities, including many in Stanislaus and adjacent Counties, were laid out as isolated railroad towns in the 1870s and 1880s by the Southern and Central Pacific, which not only built and settled, but continued to nurture the infant cities until settlement could be independently sustained.

One of the earliest and most significant arrivals in the Delta-Stockton area was Colonel J. Warner of the Ewing-Young trapping expedition, which passed through the Stockton area in the 1830s. This was followed by one of the first permanent settlements in the vicinity of Stockton – French Camp, located a short distance southwest of the project area and south of the Stockton Metropolitan Airport. French Camp was first occupied in 1832 by employees of the Hudson's Bay Company who trapped fur-bearing animals on the San Joaquin and its tributaries. French Camp was officially the end of the Oregon Trail, and was occupied by Canadians as late as 1845.

In 1841, Charles Weber arrived in California as a member of the Bidwell-Bartleson emigrant party. Weber subsequently settled on a point of land in present-day downtown Stockton, and in partnership with Guillermo Gulnac formed an early colony at this location. On January 13, 1844, Weber, Gulnac, and others received a tract of land called the Rancho del Campo de los Franceses, an area of 48,747 acres. The project area is located within the boundaries of the original Grant.

Land reclamation in California can be traced to the Swamp Land Act of 1850, federal legislation that authorized the transfer of federal swamplands to private ownership with the provision that they be drained and made productive. Operating at first under the State Board of Swamp Land Commissioners and, starting in 1867, under local boards of supervisors, owners of reclaimed land were authorized to organize special districts to acquire, build, and operate reclamation works, which have included levees, drains, canals, bulkheads, sluices, water gates, embankments, pumping plants, dams, diversion works, irrigation ditches, bridges, and roads.

Agricultural development intensified through the end of the 19th and into the 20th Centuries, spurred initially and then supported by the railroads that provided the means for bulk product to be transported to a much larger market. By the end of the 19th Century, a very substantial portion of the Valley was being intensively cultivated, with increasing mechanization occurring throughout all of the 20th Century and substantial expansion of cultivated acreage occurring with the arrival of water from the Central Valley Project.

3. RECORDS SEARCH and SOURCES CONSULTED

Several types of information were considered relevant to evaluating the types of archaeological sites and site distribution that might be encountered within the project area. The information evaluated prior to conducting the pedestrian survey includes data maintained by the Central California Information Center, and available published and unpublished documents relevant to regional prehistory, ethnography, and early historic developments.

Central California Information Center Records

The official San Joaquin County archaeological records were examined on October 27, 2016 (CCIC File No. 10072L). This search documented the following existing conditions for the 1-acre APE, and for a ¼-mile radius surrounding the APE.

- According to the Information Center, the entire APE has been surveyed by a professional archaeologist. William and Lisa Shapiro (1997) conducted an archaeological survey of the present project's APE in association with a levee rehabilitation project. Six other investigations were conducted within a ¼-mile radius surrounding the APE. These investigations include:

CCIC #	Date	Author(s)
SJ-00729	1981	Chavez
SJ-00757	1978	Napton
SJ-00777	1986	Napton
SJ-00786	1988	Napton
SJ-06643	2008	URS Corporation
SJ-08288	2015	Wills and Crawford

- According to the Information Center's records, no sites have been formally documented within the APE, and two sites (P-39-000218 and P-39-005248) have been documented within ¼-mile of the present APE. Originally recorded and excavated by Schenck and Dawson in 1929, investigation into the content and condition of site P-39-000218 revealed the presence of prehistoric burials, however it was noted that the site was severely disturbed by levee construction. P-39-005248 is the PG&E utility transmission line recorded by Wills and Crawford (2015). As no towers are located within the present APE, the site is technically located outside of the APE.

Other Sources Consulted

In addition to examining the archaeological site and survey records of San Joaquin County maintained at the Central California Information Center, the following sources were also included in the search conducted at the Information Center, or were evaluated separately:

- The National Register of Historic Places (1986, Supplements).
- The California Register of Historical Resources.
- The California Inventory of Historic Resources (State of California 1976).
- The California Historical Landmarks (State of California 1996).
- The California Points of Historical Interest (May 1992 and updates).
- The Historic Property Data File (OHP 2012).
- Map Number Two, History of San Joaquin County, California with Illustrations (1879; 1968 reprint).
- Map of the County of San Joaquin, California (1883).
- Stockton 1:31680-scale (1913).
- Stockton 15' (1952).

- Stockton West 7.5' (1952).
- Existing published and unpublished documents relevant to prehistory, ethnography, and early historic developments in the vicinity. These sources, reviewed below, provided a general environmental and cultural context by means of which to assess likely site types and distribution patterns for the project area.

4. ARCHAEOLOGICAL SURVEY and CULTURAL INVENTORY

Survey Strategy and Field Work

All of the APE was subjected to intensive pedestrian survey by means of walking parallel transects, spaced at 5 meter intervals, along the length of the entire APE.

In searching for cultural resources, the surveyor took into account the results of background research and was alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.

Fieldwork was undertaken on December 31, 2016 by Sean Michael Jensen and Asher Levin. Mr. Jensen is a professional archaeologist, with 30 years experience in archaeology and history, who meets the Secretary of Interior's Standards for Professional Qualification, as demonstrated in his listing on the California Historical Resources Information System list of qualified archaeologists and historians. No special problems were encountered and all survey objectives were satisfactorily achieved.

General Field Observations

Fieldwork identified the following general conditions within the project area. Disturbance to the ground surface has generally been substantial. The APE is located along a segment of levee adjacent to the north side of Walker Slough. Episodes of flooding have resulted in scouring and silt deposition. The ancient flood plain has been subsequently impacted by levee construction and subsequent repair work associated with the 1996-1997 flood. The survey conducted by Shapiro and Shapiro prior to the 1997 levee repair project also found no cultural resources within the APE.

Prehistoric Resources

No evidence of prehistoric activity or occupation was observed during the present pedestrian survey. The absence of such resources may be explained by the flood zone setting which would have been avoided by aboriginal people in lieu of a safer occupation setting, and/or alternatively due to the degree of disturbance which the APE has been subjected to as a result of levee construction and repair.

Historic Resources

No evidence of historic-era resources was observed during the present pedestrian survey. All of the levee components observed within the present APE are the result of contemporary (circa 1997-1998) construction activities.

5. PROJECT EFFECTS

A project may have a significant impact or adverse effect on significant historical resources/unique archaeological resources/historic properties if the project will or could result in the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance or values of the historic resource would be materially impaired. Actions that would materially impair a cultural resource or historic property are actions that would alter or diminish those attributes of a site that qualify the site for inclusion in State site registers or the National Register of Historic Places.

Based on the specific findings detailed above under ***Pedestrian Survey and Inventory***, no significant historical resources/unique archaeological resources/historic properties are present within the project area and no historic properties will be affected by the undertaking, as presently proposed.

6. NATIVE AMERICAN CONSULTATION

An information request letter was delivered to the NAHC on October 20, 2016. To date, no response has been received from the NAHC. As no prehistoric cultural material was identified during either the records search or pedestrian survey, no additional consultation was undertaken.

7. PROJECT SUMMARY

This report details the results of an archaeological inventory survey of a linear corridor extending approximately 1,100 feet in length along a segment of levee adjacent to the north side of Walker Slough, situated approximately ¼-mile west of Interstate 5, immediately south of the Van Buskirk Municipal Golf Course, within the community of French Camp, in San Joaquin County, California.

Reclamation District (RD) 404 proposes the installation of cutoff walls in approximately 1,100 feet of the existing levee, minor excavation of the levee top and resurfacing of the levee-top road to provide all-weather access. It is anticipated that all cutoff wall work will be accomplished from the levee top and will involve no work on the waterside of the levee and no work below the Mean High Water line. The subject levee is a Corps Project levee, which is also a State Plan of Flood Control facility.

Existing records at the CCIC document that all of the present APE had been subjected to previous archaeological investigation, and that no prehistoric, or historic-era sites have been

documented within the APE. As well, the present effort included an intensive-level pedestrian survey. No historic properties were identified during the present survey.

An information request letter was delivered to the NAHC on October 20, 2016. To date, no response has been received from the NAHC. As no prehistoric cultural material was identified during either the records search or pedestrian survey, no additional consultation was undertaken.

Based on the absence of significant historical resources/unique archaeological resources/historic properties within the APE, archaeological clearance is recommended for the project/undertaking as presently proposed, although the following general provisions are considered appropriate:

1. ***Consultation in the event of inadvertent discovery of cultural material***: The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future development activities. This possibility is particularly relevant considering the constraints generally to archaeological field survey, and particularly where past ground disturbance activities (e.g., levee construction and repair, etc.) have partially obscured historic ground surface visibility, as in the present case. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

2. ***Consultation in the event of inadvertent discovery of human remains***: In the event that human remains are inadvertently encountered during trenching or other ground-disturbing activity or at any time subsequently, State law shall be followed, which includes, but is not limited to, immediately contacting the County Coroner's office upon any discovery of human remains.

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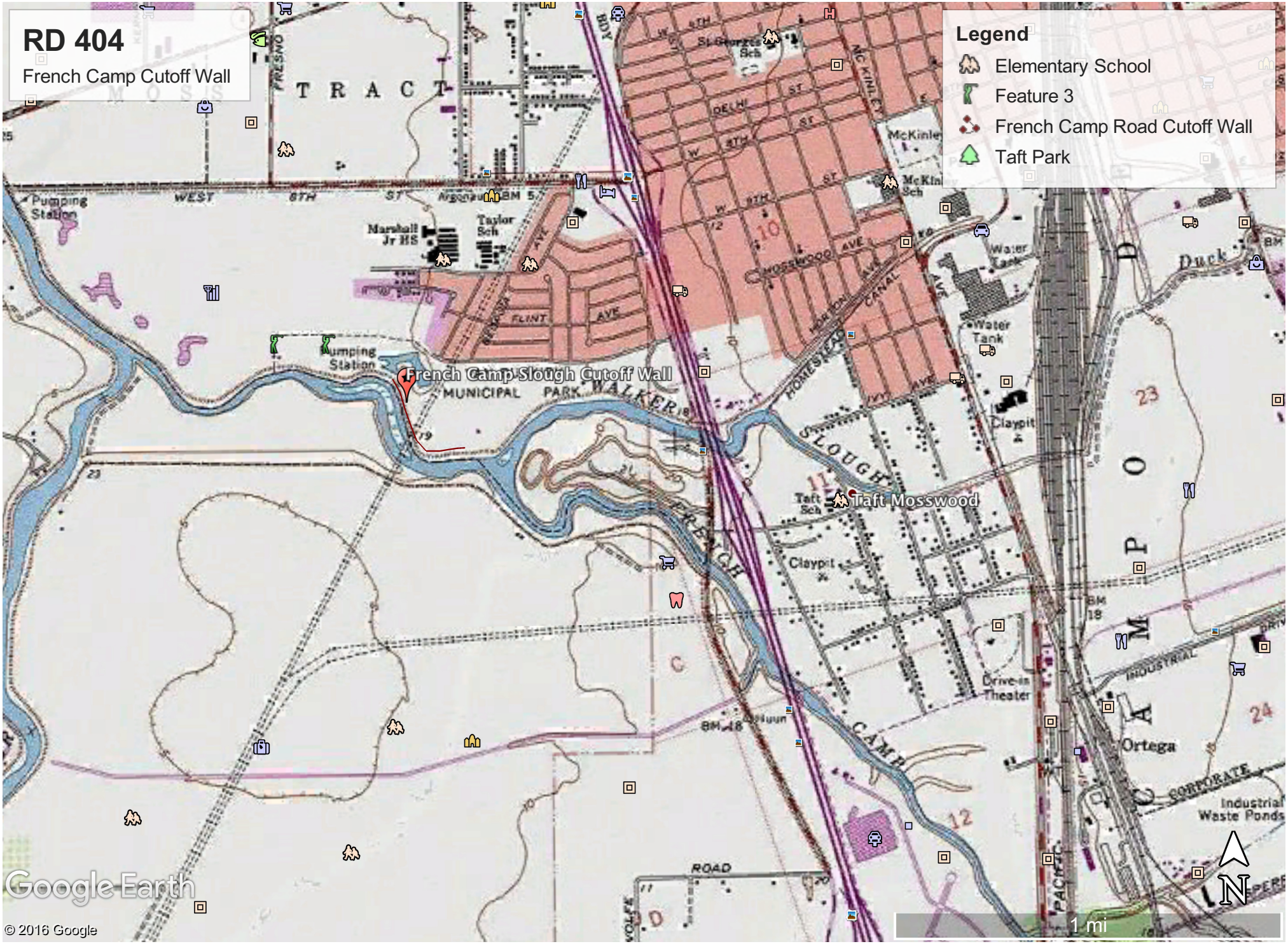
ARCHAEOLOGICAL INVENTORY SURVEY

French Camp Levee Repair Project
circa 1,100' linear corridor
San Joaquin County, California.

ATTACHMENTS

- Archaeological Survey Area Map
- Records Search from the Central California Information Center (CCIC)
- Consultation letter to the Native American Heritage Commission (NAHC)


RD 404
French Camp Cutoff Wall
Legend
Elementary School
Feature 3
French Camp Road Cutoff Wall
Taft Park
French Camp Slough Cutoff Wall
Taft Mosswood
Google Earth
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CENTRAL CALIFORNIA INFORMATION CENTER

California Historical Resources Information System

Department of Anthropology – California State University, Stanislaus
One University Circle, Turlock, California 95382
(209) 667-3307 - FAX (209) 667-3324

Alpine, Calaveras, Mariposa, Merced, San Joaquin, Stanislaus & Tuolumne Counties

Date: 10/27/2016

Records Search File No.: 10072L
Access Agreement: #136
Project: French Camp Cutoff Wall

Sean Jensen
Genesis Society
7053 Molokai Drive
Paradise, CA 95969

seanjensen@comcast.net

Dear Mr. Jensen:

The Central California Information Center received your record search request for the project area referenced above, located on the Stockton West 7.5' quadrangle in San Joaquin County. The following reflects the results of the records search for the project study area and radius:

As per data currently available at the CCaIC, the locations of resources/reports are provided in the following format: ☒ custom GIS maps ☐ shapefiles ☐ hand-drawn maps

Summary Data:

Resources within project area:	None reported to the Information Center.
Resources within 1/4 mi radius:	2: P-39-000218 and 5248
Reports within project area:	1: SJ-03154
Reports within 1/4 mi radius:	6: SJ-00729, 757, 777, 786, 6643, 8288

Resource Database Printout (list): ☐ enclosed ☒ not requested ☐ nothing listed

Resource Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (list): ☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (details): ☐ enclosed ☐ not requested ☐ nothing listed

Report Digital Database Records: ☐ enclosed ☒ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Archaeological Determinations of Eligibility:	☐ enclosed	☐ not requested	☒ nothing listed
CA Inventory of Historic Resources (1976):	☐ enclosed	☐ not requested	☒ nothing listed
Caltrans Bridge Survey:	☐ enclosed	☒ not requested	☐ nothing listed
Ethnographic Information:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Literature:	☐ enclosed	☒ not requested	☐ nothing listed
Historical Maps:	☒ enclosed	☐ not requested	☐ nothing listed

Map Number Two, *History of San Joaquin County, California with Illustrations* (1879; 1968 reprint)
Map of the County of San Joaquin, California (1883)
Stockton 1:31680-scale (1913)
Stockton 15' (1952)
Stockton West 7.5' (1952)

Local Inventories:	☐ enclosed	☐ not requested	☒ nothing listed
GLO and/or Rancho Plat Maps:	☒ enclosed	☐ not requested	☐ nothing listed

Shipwreck Inventory: ☒ not available at CCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp

Soil Survey Maps: ☒ not available at CCIC; please go to http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

Resources known to have value to local cultural groups: None have been formally reported to the CCIC.

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS

Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Note: Billing will be transmitted separately via email by our Financial Services office *($361.75), payable within 60 days of receipt of the invoice.

Sincerely,

E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System

* Invoice Request sent to: Laurie Marroquin CSU Stanislaus Financial Services
lamarroquin@csustan.edu

GENESIS SOCIETY

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7053 MOLOKAI DRIVE
PARADISE, CALIFORNIA 95969
(530) 680-6170 VOX
seanjensen@comcast.net

January 5, 2016

Native American Heritage Commission

1550 Harbor Boulevard,
West Sacramento, California 95691

Subject: ***French Camp Cutoff Wall Project, circa 1-acre, San Joaquin County, California.***

Dear Commission:

We have been requested to conduct the archaeological survey, for the above-cited project, and are requesting any information you may have concerning archaeological sites or traditional use areas for this area. Any information you might supply will be used to supplement the archaeological and historical study being prepared for this project.

Project Name:	French Camp Cutoff Wall Project, circa 1-acre
County:	San Joaquin
Map:	USGS Stockton West, 7.5'
Location:	Portion of T1N, R6E.

Thanks in advance for your assistance.

Regards,

Sean Michael Jensen

Sean Michael Jensen, Administrator

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Regards,

Sean Michael Jensen

Sean Michael Jensen, Administrator