PUBLIC REVIEW DRAFT

INITIAL STUDY/ MITIGATED NEGATIVE DECLARATION

FOR THE

MORMON SLOUGH SANITARY SEWER LINE REPLACEMENT PROJECT

Project ID: UW18030
Stockton, CA

January 12, 2023

Prepared for:

City of Stockton
Public Works Department
22 E. Weber Avenue, Room 301
Stockton, CA 95202

Prepared by:

BaseCamp Environmental, Inc.
802 W. Lodi Avenue
Lodi, CA 95240

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BaseCamp Environmental, Inc.
802 W. Lodi Avenue
Lodi, CA 95240
209-224-8213
basecampenv.com

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LIST OF ACRONYMS AND ABBREVIATIONS USED IN THIS DOCUMENT

AB	Assembly Bill
APN	Assessor's Parcel Number
BMP	Best Management Practice
Cal Fire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
Cal Water	California Water Service
CAP	Climate Action Plan
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
dB	decibel
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
IS/MND	Initial Study/Mitigated Negative Declaration
L_{eq}	equivalent sound level
LOS	Level of Service
NO_x	nitrogen oxides
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
RCEM	Road Construction Emissions Model
ROG	reactive organic gases
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
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
USA	Underground Service Alert
VMT	vehicle miles traveled

MITIGATED NEGATIVE DECLARATION

A. General Project Information

Project Title:	Mormon Slough Sanitary Sewer Line Replacement
Lead Agency Name and Address:	City of Stockton Public Works Department 22 E. Weber Avenue, Room 301 Stockton, CA 95202
Contact Person and Phone Number:	Seng Lo, (209) 937-8389
Project Location:	Along Mormon Slough approximately between South Airport Way and Beighle Alley in east-central Stockton and along Sierra Nevada Street.
Project Sponsor Name and Address:	City of Stockton Public Works Department 22 E. Weber Avenue, Room 301 Stockton, CA 95202
General Plan Designation:	Open Space/Agricultural, Industrial
Zoning:	Public Facilities, Industrial, Limited Industrial, General
Project Description:	The project proposes the replacement of approximately 2,600 feet of existing 24-inch diameter, reinforced concrete sanitary sewer pipeline with 30 to 36 inch pipeline to be installed by trenching or jacked casing. Approximately 700 feet of existing pipeline along Sierra Nevada Street would be replaced; the remaining lineal footage of replacement would be for existing pipeline along Mormon Slough.
Surrounding Land Uses and Setting:	The existing pipeline is located within and along the alignment of Mormon Slough, an intermittent flood control channel that flows through Stockton. The project alignment is largely unvegetated but include scattered trees, shrubs, grasses, and ruderal vegetation. Mormon Slough is adjacent to intensive urban development consisting mainly of

	industrial, commercial, and residential land uses. A number of homeless encampments are located along the alignment.
Other Public Agencies Whose Approval is Required:	U.S. Army Corps of Engineers (Section 404 permit), California Department of Fish and Wildlife (Streambed Alteration Agreement), Regional Water Quality Control Board (Section 401 Water Quality Certification), Central Valley Flood Protection Board (encroachment permit)
Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, has consultation begun?	No tribes have requested consultation.

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		Energy
✓	Geology/Soils		Greenhouse Gas Emissions	✓	Hazards/Hazardous Materials
✓	Hydrology/Water Quality		Land Use		Mineral Resources
✓	Noise	✓	Population/Housing		Public Services
	Recreation		Transportation	✓	Tribal Cultural Resources
✓	Utilities/Service Systems		Wildfire	✓	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.

□ 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.

CITY OF STOCKTON
PUBLIC WORKS DEPARTMENT

Jodi Almassy, Director _____ Date

1.0 INTRODUCTION

1.1 Project Brief

This document is an Initial Study/Mitigated Negative Declaration (IS/MND) for the Mormon Slough Sanitary Sewer Line Replacement Project (project). The project site is a largely new pipeline alignment that follows the existing sewer line to be replaced over a distance of approximately 2,600 feet. The existing line to be replaced extends south along Sierra Nevada Street, then east along Mormon Slough from Sierra Nevada Street to the vicinity of Bieghle Alley in the City of Stockton, San Joaquin County, California (Figures 1-1 through 1-4 and 2-1). The City of Stockton (City) is the project proponent is the Lead Agency for the purposes of CEQA. The project would require approval by the Stockton City Council and approvals from agencies with jurisdiction over the Slough portions of the alignment. This IS/MND has been prepared in compliance with the requirements of the California Environmental Quality Act (CEQA).

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 may cause direct or indirect physical changes in the environment. A project includes the agency's direct activities and activities that involve public agency approvals or funding. The CEQA Guidelines (California Code of Regulations Title 14, Division 6, Chapter 3) provides guidance for an agency's implementation of CEQA.

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 identified significant effects or reduce them to a level that is less than significant. If the Initial Study does not identify significant effects, then the agency ordinarily prepares a Negative Declaration. If the Initial Study concludes that significant effects would occur but also identifies mitigation measures that would reduce these significant effects to a level that is less than significant, then the agency may prepare a Mitigated Negative Declaration. If a project would involve significant effects that cannot be feasibly mitigated, then the agency must prepare an Environmental Impact Report (EIR). The agency may also decide to proceed directly with the preparation of an EIR without first preparing an Initial Study.

The proposed project is a "project" as defined by CEQA and is not exempt from CEQA consideration. The City has determined that the project may have potentially significant environmental effects and therefore requires preparation of an Initial Study. This Initial Study describes the proposed project and its environmental setting, discusses the potential

environmental effects of the project, and identifies feasible mitigation measures that would eliminate any potentially significant environmental effects of the project or reduce them to a level that would be 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
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Mandatory Findings of Significance (including Cumulative Impacts)

This Initial Study concludes that the project would have potentially significant environmental effects but that all these effects would be avoided or reduced to a level that would be less than significant with identified mitigation measures. The project applicant (City) has accepted the obligation to implement all the mitigation measures. As a result, the City has prepared a Mitigated Negative Declaration and has issued a Notice of Intent to adopt the IS/MND for the project. The Notice of Intent, inside the cover of this document, shows the time available for public comment on the IS/MND.

1.3 Project Background

The subject sewer line is an existing 24-inch reinforced concrete trunk line transporting wastewater collected from the eastern portions of Sanitary Sewer Collection System #6 and portions of System #4 to other successively larger trunk lines leading to the City Regional Wastewater Control Facility on Navy Drive.

1.4 Environmental Evaluation Checklist Terminology

The project's potential environmental effects are evaluated in the Environmental Evaluation Checklist presented in Chapter 3.0 of this IS/MND. The checklist includes a list of environmental considerations against which the project is evaluated. For each question, the City determines whether the project would involve 1) a Potentially Significant Impact, 2) a Less Than Significant Impact with Mitigation Incorporated, 3) a Less Than Significant Impact, 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., the environmental effect may be significant, and feasible mitigation measures have not been defined that would reduce the impact to a

level that would be less than significant. If there is a Potentially Significant Impact entry in the Initial Study, then an EIR is required. No Potentially Significant Impacts have been identified in this IS/MND.

- An environmental effect of the project 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 defined mitigation measures. This IS/MND identifies several impacts that are Less than Significant with Mitigation Incorporated.

- A Less Than Significant Impact occurs when the project would involve an environmental impact, but the impact would not cause a substantial adverse change to the physical environment that would require mitigation. This IS/MND identifies several impacts that are considered Less than Significant.

- A determination of No Impact is self-explanatory. This IS/MND identifies several areas of environmental concern in which the project would have No Impact on the physical environment.

This IS/MND identifies certain potentially significant environmental effects that would be mitigated by implementation of existing provisions of law and standards of practice related to land use planning and environmental protection. Where appropriate, such provisions are identified and considered in the environmental impact analysis, and the degree to which they would reduce potential environmental effects is discussed. These protections are considered part of the existing regulatory environment and are assumed to avoid or minimize the potential environmental effects of the project. Additional mitigation measures are identified in this Initial Study, as necessary, when existing provisions of law and standards of practice are not adequate to avoid potentially significant environmental effects or to reduce them to a level that is less than significant.

1.5 Summary of Environmental Effects and Mitigation Measures

Table 1-1, which follows Figures 1-1 through 1-4, summarizes the results of the Environmental Evaluation Checklist and associated narrative discussion in Chapter 3.0 of this IS/MND. The potential environmental impacts of the proposed project are listed in the left-most column of this table. The level of significance of each impact is indicated in the second column. Feasible mitigation measures that avoid or minimize the impacts, if necessary, are shown in the third column, and the significance of the impact after the mitigation measures are applied is shown in the fourth column.

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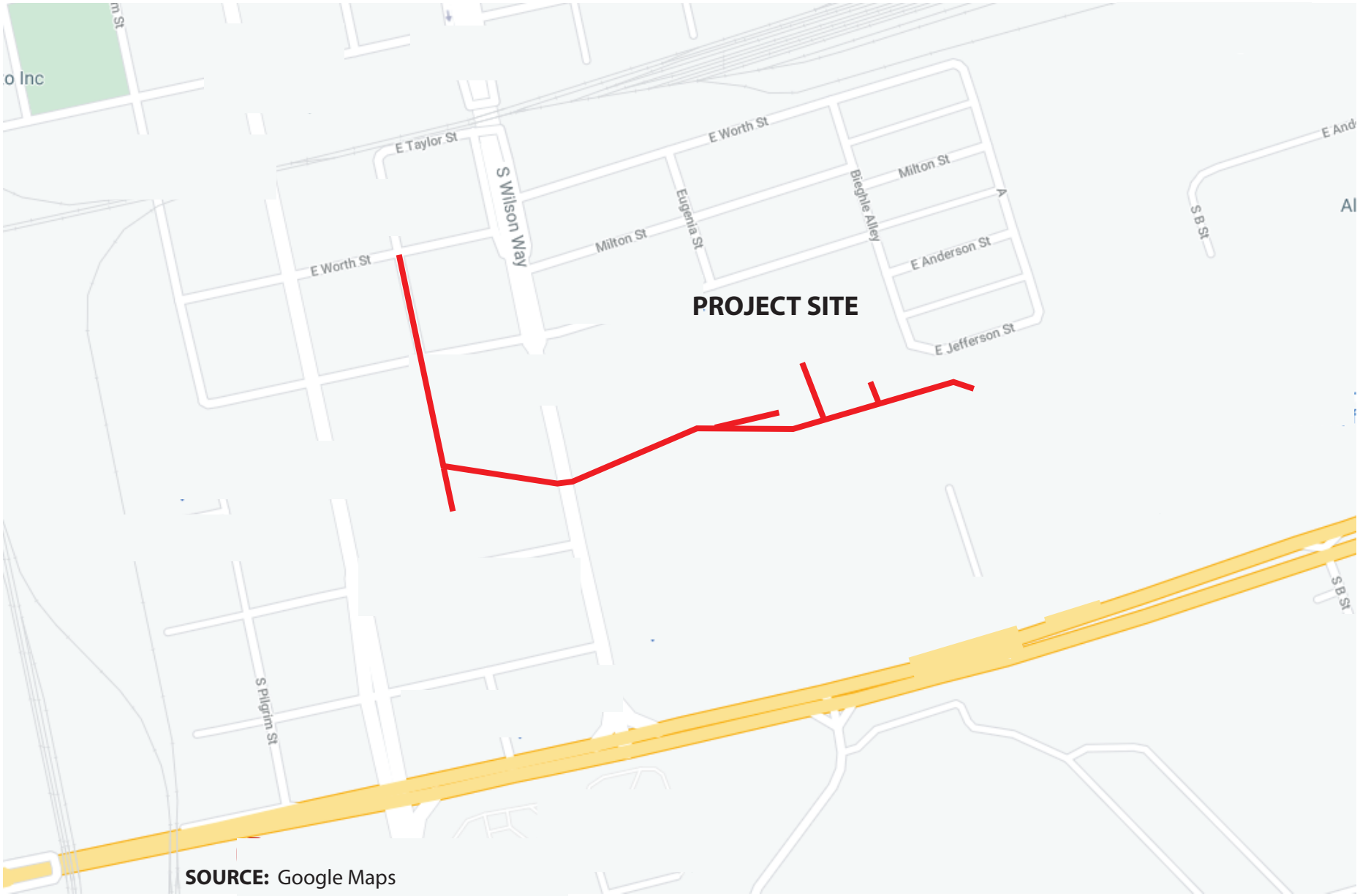
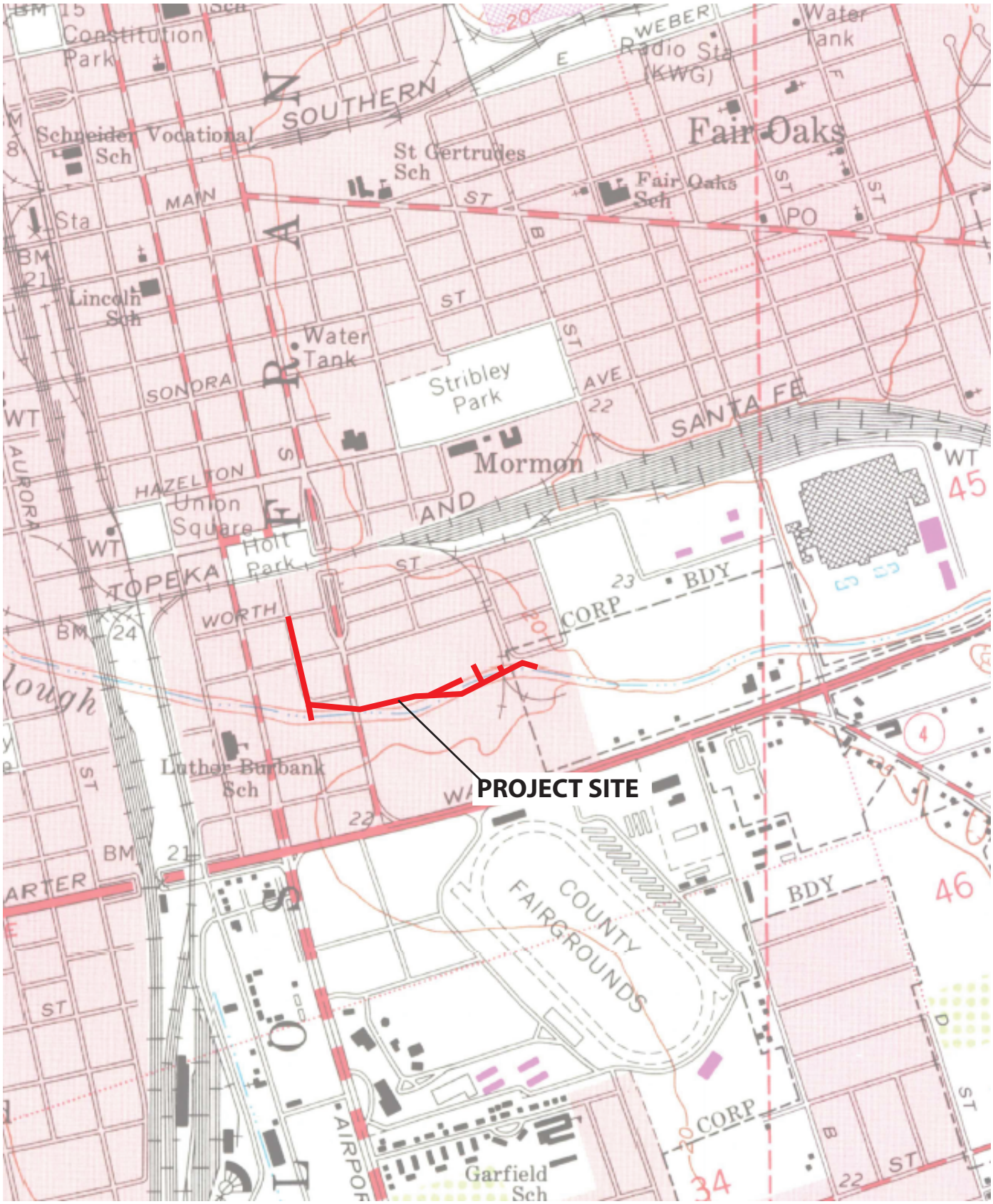
Figure 1-1
REGIONAL PROJECT LOCATION



SOURCE: Google Maps

Figure 1-2
STREET MAP



SOURCE: USGS Quadrangle Map, Stockton West 1968

BaseCamp Environmental

SOURCE: Google Earth

Figure 1-4
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 and Highways	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) Conflict with Agricultural Zoning or Williamson Act Contract	NI	None required	-
c) Conflict with Forest Land Zoning	NI	None required	-
d) Forest Land Conversion	NI	None required	-
e) Conversion or loss of Farmland, Forestland, and Timberland	NI	None required	-
3.3 AIR QUALITY			
a) Consistency with Air Quality Plans	LS	None required	-
b) Cumulative Emissions	LS	None required	-
d) Exposure of Sensitive Receptors	LS	None required	-
e) Odors and Other Emissions	LS	None required	-

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.4 BIOLOGICAL RESOURCES			
a) Special-Status Species	PS	BIO-1: The City shall apply to the San Joaquin Council of Governments (SJCOG) for coverage under the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). The project site shall be inspected by the SJMSCP biologist, who will recommend which Incidental Take Minimization Measures (ITMMs) set forth in the SJMSCP shall be implemented. The project applicant shall pay the required SJMSCP fee, if any, and be responsible for the implementation of the specified ITMMs.	LS
b) Riparian and Sensitive Habitats,	LS	None required	-
c) Waters of the U.S. and Wetlands	PS	BIO-2: Prior to the start of construction work, the City shall obtain an appropriate permit from the U.S. Army Corps of Engineers (Corps). As part of the permit process, the Corps shall verify delineations identifying jurisdictional Waters of the U.S. and wetlands. The delineations shall be used to determine if any project work will encroach upon any jurisdictional water, thereby necessitating an appropriate permit. Depending on the Corps permit issued, the City shall also apply for a Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board. BIO-3: Prior to the start of construction work, the City shall obtain any necessary permits from the California Department of Fish and Wildlife and the Central Valley Flood Protection Board. The City shall comply with all conditions attached to any required permit.	LS
d) Fish and Wildlife Movement	PS	Mitigation Measure BIO-1.	LS
e) Local Biological Requirements	NI	None required	-
f) Habitat Conservation Plans	PS	Mitigation Measure BIO-1.	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
3.5 CULTURAL RESOURCES			
a) Historic Resources	NI	None required	-
b) Archaeological Resources	PS	CULT-1: If any subsurface archaeological resources are encountered during construction, all construction activities within a 50-foot radius of the encounter shall be immediately halted until a qualified archaeologist can examine these materials, initially evaluate their significance and, if potentially significant, recommend measures on the disposition of the resource. Recommended measures could include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The Public Works Department shall be notified, and the contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the Public Works Department, consistent with the requirements of the CEQA guidelines.	LS
c) Human Burials	LS	None required	-
3.6 ENERGY			
a) Consumption of Energy Resources	LS	None required	-
b) Conflict with Energy Plans	NI	None required	-
3.7 GEOLOGY AND SOILS			
a-i) Fault Rupture Hazards	NI	None required	-
a-ii) Seismic Ground Shaking	LS	None required	-
a-iii) Seismic-Related Ground Failure	LS	None required	-

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
a-iv) 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	-
f) Paleontological Resources	PS	GEO-1: If any paleontological resources are encountered during project construction, all activities shall be halted within 50 feet of the discovery until a qualified paleontologist can examine these materials, determine their significance and, if significant, recommend 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. The project applicant shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the Municipal Utilities Department, consistent with the requirements of the CEQA Guidelines.	LS
3.8 GREENHOUSE GAS EMISSIONS			
a, b) Project GHG Emissions and Consistency with GHG Reduction Plans	LS	None required	-
3.9 HAZARDS AND HAZARDOUS MATERIALS			
a) Hazardous Materials Transport, Use and Disposal	NI	None required	-
b) Upset and Accident Conditions	PS	HAZ-1: Construction activity in the vicinity of the Mormon Slough channel shall at all times be isolated from any wetted portion of the channel, so as to prevent any potential contamination from surface runoff or liquid	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		materials spilled within the construction area. The project shall comply with applicable requirements of all State and federal agency permits related to construction of the project.	
c) Release of Hazardous Materials near Schools	NI	None required	-
d) Hazardous Materials Sites	PS	HAZ-2: Prior to the start of construction on the Mormon Slough portion of the project alignment within 400 feet of Wilson Way, a Phase I Environmental Site Assessment shall be conducted to determine whether and where potential soil contamination may exist within the project alignment. Where the assessment indicates the potential presence of soil contamination, additional investigation and testing shall be conducted to identify areas of contamination that could pose a risk to human health. Any such contaminated area identified shall be remediated in accordance with applicable State and local regulations pertaining to the contaminant.	LS
e) Public Airports	NI	None required	-
f) Emergency Response and Evacuations	PS	HAZ-3: Prior to the start of work in Sierra Nevada Street, the contractor shall prepare and implement a Traffic Control Plan in coordination with the Stockton Public Works, Police, and Fire Departments. The Traffic Control Plan shall address the routing of emergency vehicles, truck routing, and handling of pre-project daily traffic volumes as required during the construction period. It also shall address access to adjacent properties, pedestrian and bicycle safety provisions, and notification in advance of any street and driveway closures. The contractor shall specify dates and times of road closures or restrictions, if any, and shall ensure that adequate access will be provided for emergency vehicles.	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
g) Wildland Fire Hazards	LS	None required	-
3.10 HYDROLOGY AND WATER QUALITY			
a) Water Quality	PS	HYDRO-1: A Water Quality Control Plan shall be prepared for the project which shall identify project-specific water quality control measures that will minimize potential for erosion and sedimentation of the Mormon Slough waterway. The Plan shall include identification of construction units that can be hydrologically isolated from the waterway by grading or placement of soil; and the placement, maintenance and periodic inspection of erosion control devices. The requirements of the Water Quality Control Plan shall be integrated with Construction General Permit requirements and applicable requirements of the US Army Corps of Engineers Section 404 permit, the Section 401 Water Quality Certification from RWQCB, and the CDFW Lake and Streambed Alteration Agreement.	LS
b) Groundwater Supplies and Recharge	NI	None required	-
c-i, ii) Drainage Patterns	NI	None required	-
c-iii) Runoff	NI	None required	-
c-iv) Flooding Hazards	NI	None required	-
d) Release of Pollutants in Flood, Tsunami, or Seiche Zones	NI	None required	-
e) Conflicts with Water Quality or Groundwater Management Plans	LS	None required	-
3.11 LAND USE AND PLANNING			

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
a) Division of Established Community	NI	None required	-
b) Conflicts with Land Use Plans, Policies and Regulations	LS	None required	-
3.12 MINERAL RESOURCES			
a, b) Availability of Mineral Resources	NI	None required	
3.13 NOISE			
a) Generation of Noise Exceeding Local Standards	PS	NOISE-1: The following measures shall be implemented to minimize noise impacts at sensitive receptors (i.e., residences) during construction: • Construction activities shall be limited to the hours from 7:00 a.m. to 6:00 p.m. on all working days. Construction work shall not occur on Sundays and federal holidays. • Use newer equipment with improved muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.). • Turn off idling equipment when not in use for more than 5 minutes, in accordance with State regulation. • Conduct noisier construction operations during times of least sensitivity to receptors.	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		• Provide frequent activity update of all construction activities to affected residences.	
b) Exposure to Groundborne Vibrations	LS	None required	-
c) Public Airport and Private Airstrip Noise	NI	None required	-
3.14 POPULATION AND HOUSING			
a) Unplanned Population Growth	NI	None required	-
b) Displacement of Housing or People	NI	None required	-
3.15 PUBLIC SERVICES			
a-i) Fire Protection	NI	None required	-
a-ii) Police Protection	NI	None required	-
a-iii) Schools	NI	None required	-
a-iv) Parks	NI	None required	-
a-v) Other Public Facilities	NI	None required	-
3.16 RECREATION			
a, b) Recreational Facilities	NI	None required	-
3.17 TRANSPORTATION			
a) Conflicts with Transportation Programs and Plans	NI	None required	-
b) Conflict with CEQA Guidelines Section 15064.3(b)	NI	None required	-

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
c) Traffic Hazards	NI	None required	-
d) Emergency Access	PS	Mitigation Measure HAZ-3.	LS
3.18 TRIBAL CULTURAL RESOURCES			
a, b) Tribal Cultural Resources	PS	TCR-1: If tribal cultural resources, including human remains and associated funerary objects, are encountered, the City shall be immediately notified of the find, and the City shall notify the appropriate tribal representatives. The qualified archaeologist and tribal representatives shall examine the materials and determine their significance as tribal cultural resources and shall recommend mitigation measures needed to reduce potential cultural resource effects to a level that is less than significant in a written report to the City, with a copy to the tribal representatives. The City will be responsible for implementing the report recommendations. Avoidance is the preferred means of disposition of tribal cultural resources.	LS
3.19 UTILITIES AND SERVICE SYSTEMS			
a) Relocation or Construction of Utility Facilities	PS	UTIL-1: Existing utility lines and facilities shall be identified on project plans. Project design shall enable construction of the planned improvements to occur without damage to existing utilities. Should utility conflicts be unavoidable, project plans and specifications shall provide for relocation or reconstruction of existing utilities as required. UTIL-2: The project contractor shall consult with Underground Service Alert (USA) prior to construction to verify the location of any underground utilities in the construction area. Should USA identify an underground utility facility not accounted for in the project plans, the City shall contact the company or agency responsible for the facility in question to verify its existence. If the	LS

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance Before Mitigation Measures	Mitigation Measures	Significance After Mitigation Measures
		existence of this facility is confirmed, then no construction shall proceed in the vicinity of this facility until project plans and specifications are modified such that this facility would be avoided, relocated, or reconstructed when construction work resumes.	
b) Water Supplies	NI	None required	-
c) Wastewater Treatment Capacity	NI	None required	-
d, e) Solid Waste Services	NI	None required	-
3.20 WILDFIRE			
a) Emergency Response Plans and Emergency Evacuation Plans	NI	None required	-
b) Exposure of Project Occupants to Wildfire Hazards	LS	None required	-
c) Installation and Maintenance of Infrastructure	LS	None required	-
d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes	NI	None required	-
3.21 MANDATORY FINDINGS OF SIGNIFICANCE			
a) Findings on Biological and Cultural Resources	PS	Mitigation measures in Sections 3.4 and 3.5 above.	LS
b) Findings on Cumulatively Considerable Impacts	LS	None required	-
c) Findings on Adverse Effects on Human Beings	LS	None required	-

TABLE 1-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Notes: NI = No Impact; LS = Less Than Significant; PS = Potentially Significant

2.0 PROJECT DESCRIPTION

2.1 Project Location

The project site is adjacent to and follows the existing sewer line south along Sierra Nevada Street from Worth Street approximately 700 linear feet to the Mormon Slough alignment, then east within the Mormon Slough channel area approximately 1,900 linear feet to near Jefferson Street at Bieghle Alley in the City of Stockton, San Joaquin County, California (Figures 1-1 through 1-4, and 2-1). Additionally, the project would involve possible replacement of an existing maintenance hole east of the proposed alignment.

The project site is shown on the U.S. Geological Survey's Stockton West 7.5-minute quadrangle maps within an unsectioned area of the Campo de los Franceses land grant within the area defined as Township 1 North, Range 6 East, Mt. Diablo Base and Meridian. The latitude of the project site is approximately 37° 56′ 40″ North, and the longitude is approximately 121° 16′ 03″ West.

2.2 Project Details

The project proposes the replacement of approximately 2,600 linear feet of existing 24-inch diameter, reinforced concrete sanitary sewer pipeline. The location of specific segments of the project are described in Table 2-1 and shown in Figure 2-2.

TABLE 2-1
PROJECT DETAILS

Station	Description	Placement Notes
1+00 to 8+40	Sierra Nevada Street	Trenching through existing paved public street and private parking area
8+40 to 12+00	Parallels Mormon Slough well outside Slough channel area	Trenching through unpaved area adjacent to existing unpaved road
12+00 to 13+00	Wilson Way Bridge Undercrossing	Jacked casing to accommodate replacement pipeline
13+00 to 19+00	In and near Slough channel	Trenching through unpaved area, confined at stream crossing

19+00 to 25+00	Dry slope adjacent to Slough	Trenching through unpaved area
25+00 to 27+00	In and near Slough channel	Trenching through unpaved area, confined disturbance area

The project would consist of replacement of the existing 24-inch pipeline with a 30- or 36-inch pipeline. The replacement would be located primarily within existing easements or right-of-way. Where construction is located on property not owned by the City, construction will be within existing easements, or an appropriate right to construct will be obtained prior to construction

Construction activity would involve conventional open cut excavation, shoring where needed, removal of the existing pipeline in certain sections of the project, and placement of pipeline bedding, the pipeline and backfill material. Existing ground cover along the alignment would be restored to existing conditions following construction. Depth and grade of the replacement line would vary along the project alignment, ranging from 13.5 feet within Mormon Slough to a maximum of approximately 20 feet at the intersection of Sierra Nevada and Worth Streets.

Existing pipe would be removed in sections where the replacement pipe and existing pipeline alignments are the same or close. Pipeline removal would be required, because the invert elevation of the new pipeline would be below that of the existing pipeline. As currently understood, the existing pipeline would need to be removed along the Sierra Nevada section (Stations 1+00 to 8+40), from Stations 12+00 to 15+90, and at the Station 16+30 crossing of the existing pipeline alignment.

From Stations approximately 12+00 to 13+00, the replacement pipeline would be located in a casing of diameter 54 to 72 inches, which will be pushed from a jacking pit at Station 12+00 to a receiving pit at Station 13+00; the direction could potentially be reversed. The casing would be placed using the "swallowing" method, where the casing is advanced, and the existing pipe, earth, and other material is removed from inside the casing, after which the replacement pipe would be installed and stabilized within the casing with flowable grout or sand backfill.

Project construction would involve heavy equipment movement within and along the project corridor. The disturbance area is estimated at approximately 40 feet along the majority of the corridor, with narrower corridors in the vicinity of Mormon Slough stream crossings and in the area east of Bieghle Alley. A potential contractor staging area is designated south of the corridor between Stations 16+00 and 19+00.

2.3 Permits, Entitlements, and Approvals

The principal discretionary approval associated with the project would be granted by the City of Stockton City Council as the project proponent. The project would require

compliance with City of Stockton storm water requirements, including compliance with the State Water Resources Control Board (SWRCB) Construction General Permit.

The project involves work in and adjacent to Mormon Slough, which requires permits from federal and State agencies with jurisdiction. Required permits would include a Section 404 permit from the U.S. Army Corps of Engineers (Corps), a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB), and a Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW). Applications for these permits will be filed and processed during and after the public review of the IS/MND.

BaseCamp Environmental

SOURCE: Kjeldsen, Sinnock and Neudeck

Figure 2-1
SITE PLAN

BaseCamp Environmental

SOURCE: Kjeldsen, Sinnock and Neudeck

Figure 2-2
ALIGNMENT PLAN

3.0 ENVIRONMENTAL CHECKLIST FORM

3.1 AESTHETICS

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

NARRATIVE DISCUSSION

Environmental Setting

The project site is located primarily along an existing storm drainage channel that passes through within an urbanized area of south-central Stockton. Lands immediately along and adjacent to the project alignment are largely vacant of buildings or other improvements. These are flat to sloping channel bank areas that are intermittently vegetated with trees, shrubs, grasses and ruderal vegetation. The project alignment is located along and crosses portions of the Slough channel that support discontinuous areas of wetland vegetation. Vegetation along the project alignment is discussed in more detail in Section 3.4 Biological Resources.

Lands paralleling the project alignment outside the channel banks consist primarily of the rear areas of both light and heavy industrial uses that front on nearby streets north and south of the channel. These industrial areas include parking areas and outdoor storage of products, shipping containers and waste materials. These areas do not contain any notable elements of urban design or landscaping or aesthetic value. In the easternmost portion of the project area, there are single-family residences located north of the project along Bieghle Alley, East Jefferson Street, S. Sierra Nevada Street and E. Anderson Street.

The open space along Mormon Slough is the most significant visual feature in the project vicinity, due to lack of buildings and the difference in elevation between the channel floor and the adjacent street grade. Although conditions vary, the channel area is occupied by tents and temporary structures and improvements used by the unhoused population of the downtown area. At most times, the channel area is extensively littered with discarded containers and personal belongings.

Lighting at the project site is limited to street lighting along the cross-streets and other streets near the site, together with safety and security lighting associated with adjacent land uses.

California Public Resources Code Section 21099 states that the aesthetic and parking impacts of residential, mixed-use residential, or employment center projects on an infill site within a transit priority area shall not be considered significant. The project is not a residential, mixed-use residential, or employment center project; therefore, it does not meet the criteria of Section 21099.

Environmental Impacts and Mitigation Measures

a) Scenic Vistas.

Scenic vistas have been defined as vantage points with a broad and expansive view of a significant landscape feature, such as a mountain range or coastline. The Stockton General Plan does not designate scenic vistas. However, distant views of the Sierra Nevada mountains, Mt. Diablo and the Coast Range are sometimes available in the Stockton area, but they are usually limited by the built environment. The project would not modify the surrounding built environment and therefore have no effect on distance views. The project would have no impact on scenic vistas.

b) Scenic Resources.

The Stockton General Plan identifies open space, agricultural fields, and riparian areas, particularly along the San Joaquin River and the Calaveras River, as significant visual features (City of Stockton 2018a). There are no such features in the project area. Although the project will require substantial construction disturbance along the proposed alignment, it will not affect any scenic resources as identified in the Stockton General Plan. Upon completion, the project site would be restored to its pre-project condition and result in no net long-term change in appearance of the site.

The California Department of Transportation (Caltrans) list of designated scenic highways under the California Scenic Highway Program has only two officially designated state scenic highways within San Joaquin County: Interstate 5 from the Stanislaus County Line to Interstate 580, and Interstate 580 from Interstate 5 to the Alameda County Line (Caltrans 2017). The project site is not on or near either of the designated Scenic Highways. The Stockton General Plan has not designated any local roadways as scenic. The project would have no impact on scenic resources.

c) Visual Character and Quality.

Neither the project alignment nor the predominantly industrial and commercial uses that adjoin the Mormon Slough channel are aesthetically sensitive. The construction contractor would be required to restore the project site to pre-project conditions after work is completed. As a result, the potential aesthetic effects of the project would be temporary, and less than significant. As a result of restoration, the project would not result in any long-term aesthetic change.

Residences at both ends of the project site might be more sensitive to aesthetic change and be subject to some aesthetic impact during construction activities. Construction disturbance would not encroach on the streets adjacent to these homes but would be located entirely within the public right-of-way or easement and of a relatively short duration in this area. Project impacts on visual character and quality would be less than significant.

d) Light and Glare.

The project would not involve the installation of lighting facilities. During the construction phase of the project, some temporary construction lighting may be required in the work area if construction must extend after dark. Short-term impacts on adjacent properties could occur from spillover light and associated glare, but as such lighting would be temporary and work time after dark would be limited (see Section 3.13, Noise). Potential impacts on adjoining uses would be limited to the vicinity of the existing residential area near the eastern end of the project. The project would replace existing underground facilities and would not include any known features that could produce glare. Project impacts related to light or glare would be less than significant.

3.2 AGRICULTURAL 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, 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?				✓

d) Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use?				✓

NARRATIVE DISCUSSION

Environmental Setting

The project site is a managed flood control channel within a developed urban area. Land adjacent to the project site is not used for agricultural activities.

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," "Unique Farmland," and "Farmland of Local Importance." The 2018 Important Farmland Map of San Joaquin County designates the project site and vicinity as Urban and Built-Up Land (FMMP 2018).

Environmental Impacts and Mitigation Measures

a) Agricultural Land Conversion.

There is no agricultural land or agricultural use in the vicinity of the project site. As noted, the project site vicinity is classified as Urban and Built-Up Land. There is no Farmland as defined in CEQA Guidelines Appendix G in the vicinity. The project would not convert Farmland and would have no impact on this issue.

b) Agricultural Zoning and Williamson Act.

The project site vicinity is zoned for urban uses and not for any agricultural use. The Williamson Act preserves agricultural land by means of a contract between the landowner and local government that keeps the contracted land in agricultural use in exchange for a lower property tax assessment. As there is no agricultural land in the vicinity, there are no lands under a Williamson Act contract. The project would have no impact on agricultural zoning or Williamson Act contracts.

c, d) Forest Lands.

The project is in a developed urban area; there are no forest lands on the project site or in the vicinity. No land in the project vicinity is zoned as forest land or timberland. The project would have no impact on forest lands.

e) Indirect Conversion of Farmland or Forest Land.

The project site is surrounded by urban development that is fully served with existing street and utility infrastructure. There is no agricultural land in the vicinity. Given the urbanized nature of the project site and vicinity, the project would not add infrastructure

or undertake any other activity that would facilitate the conversion of agricultural land to non-agricultural uses. The project would have no impact on indirect conversion of agricultural lands. As there are no forest lands in the vicinity, the project also would have no impact on indirect conversion of forest lands.

3.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollutant 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) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			✓	
c) Expose sensitive receptors to substantial pollutant concentrations?			✓	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The project site is within the San Joaquin Valley Air Basin. The San Joaquin Valley Air Pollution Control District (SJVAPCD), which includes San Joaquin County, has jurisdiction over most air quality matters in the Air Basin; vehicle emissions are the responsibility of the California Air Resources Board (ARB). The SJVAPCD is tasked with developing and implementing plans, programs and regulations that would enable the Air Basin to attain ambient air quality standards set under both the federal and California Clean Air Acts. Under their respective Clean Air Acts, both the State of California and the federal government 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 criteria pollutants under its Clean Air Act; none of these would be generated in the project area.

Table 3-1 shows the current attainment status of the Air Basin relative to the federal and State ambient air quality standards for criteria pollutants. Except for ozone and particulate matter, the Air Basin is in attainment of, or unclassified for, all federal and State ambient air quality standards. Ozone is not emitted directly into the air but is formed when reactive organic gases (ROG) and nitrogen oxides (NO_x) react in the

atmosphere in the presence of sunlight. The SJVAPCD currently has a 2007 Ozone Plan and a 2013 Plan for the Revoked 1-Hour Ozone Standard for the Air Basin to attain federal ambient air quality standards for ozone.

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 2020.

Particulate matter is a mixture of solid and liquid particles suspended in air, including dust, pollen, soot, smoke, and liquid droplets. In San Joaquin County, particulate matter is generated by a mix of rural and urban sources, including agricultural operations, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere. Two types of particulate matter are of concern: particulate matter 10 micrometers or less in diameter (PM_{10}), and particulate matter 2.5 micrometers or less in diameter ($PM_{2.5}$). The SJVAPCD currently has a 2015 $PM_{2.5}$ Plan for the 1997 federal $PM_{2.5}$ standard, a 2012 $PM_{2.5}$ Plan for the 2006 federal $PM_{2.5}$ standard, a 2016 Moderate Area Plan for the 2012 federal $PM_{2.5}$ standard, and a 2007 PM_{10} Maintenance Plan to maintain the Air Basin's attainment status of the federal PM_{10} standard.

In addition to the criteria pollutants, the California Air Resources Board has 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 operations.

As noted, the SJVAPCD is tasked with implementing regulations designed to attain ambient air quality standards. SJVAPCD regulations that are potentially 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.

Environmental Impacts and Mitigation Measures

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

TABLE 3-2
SJVAPCD SIGNIFICANCE THRESHOLDS
AND PROJECT CONSTRUCTION EMISSIONS

Pollutant	SJVAPCD Significance Threshold	Total Construction Emissions (tons)
ROG	10	0.02
NO_x	10	0.21
CO	100	0.19
SO_x	27	0.00
PM_{10}	15	0.01
$PM_{2.5}$	15	0.01

Sources: Road Construction Emissions Model ver. 9.0.0, SJVAPCD 2015.

a) Air Quality Plan Consistency.

The project's construction emissions were estimated using the Road Construction Emissions Model (RCEM), assuming a three-month continuous construction period. Originally developed to estimate emissions generated by road construction projects, the RCEM has been subsequently modified to be applicable to all projects that are linear in character. The RCEM results for the project are available in Appendix A of this IS/MND, and a summary of the results is provided in Table 3-2.

As indicated by Table 3-2, none of the project construction emissions exceed the SJVAPCD significance thresholds. As the significance thresholds were established in part to ensure consistency with the objectives of the air quality plans adopted by the SJVAPCD, project construction emissions would therefore be consistent with these plans. The project would not generate any pollutant emissions once construction work is completed.

While project construction emissions would not be significant, the project would still be required to comply with applicable SJVAPCD rules and regulations, which would further reduce potential air quality impacts. As noted, SJVAPCD Regulation VIII contains measures to reduce fugitive dust emissions during construction. Dust control provisions are routinely included in site improvement plans and specifications, along with construction contracts. Implementation of these actions would further reduce project emission impacts already considered less than significant.

b) Cumulative Emissions.

As noted in a) above, project emissions would not exceed SJVAPCD significance thresholds. Future attainment of federal and State ambient air quality standards is a function of successful implementation of the SJVAPCD's attainment plans. Consequently, the application of significance thresholds for criteria pollutants is relevant to the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality. Pursuant to the SJVAPCD's guidance, if project-specific emissions would be less than the thresholds of significance for criteria pollutants, the project would not be expected to result in a cumulatively considerable net increase of any criteria pollutant for which the SJVAPCD is in nonattainment under applicable federal or State ambient air quality standards. As project emissions would not exceed SJVAPCD significance thresholds, the cumulative impacts of these emissions would be less than significant.

c) Exposure of Sensitive Receptors.

"Sensitive receptors" refer to those segments of the population most susceptible to poor air quality (i.e., children, the elderly, and those with pre-existing serious health problems affected by air quality). Land uses where sensitive individuals are most likely to spend time also may be called sensitive receptors; these include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (SJVAPCD 2015). Prolonged exposure to pollutants in sufficient concentrations could have adverse health impacts on nearby sensitive receptors.

There are a few residences close to the eastern and western ends of the project site. Project emissions in these areas would be temporary, being generated only by construction activities in the immediate vicinity of the residences. There would be no emissions generated by project operations. Therefore, nearby residences would not be subject to prolonged exposure to pollutants. Project impacts on sensitive receptors would be less than significant.

d) Odors and Other Emissions.

The project is not expected to generate significant odors, other than from construction activities. Other emissions may include diesel particulate matter emissions from diesel engines and equipment. Diesel particulate matter is considered a TAC. However, such emissions would be localized and would dissipate rapidly outside the project site. As noted above, the nearest sensitive receptors would be adjacent residences, which would be exposed temporarily to construction emissions. Project impacts related to odors and other emissions would be less than significant.

3.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
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 U.S. Fish and Wildlife Service?			✓	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
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 for this section is provided by a Biological Resources Assessment prepared by Moore Biological Consultants, unless otherwise cited. Appendix B contains a copy of this report. The preparation of the report involved reviewing the California Natural Diversity Database (CNDDB), managed by the California Department of Fish and Wildlife (CDFW), and the IPaC database, managed by the U.S. Fish and Wildlife Service (USFWS). It also involved a field survey of the project site conducted on April 9, 2021 to document vegetation communities, potential jurisdictional Waters of the U.S., and potentially suitable habitat for special-status species.

Environmental Setting

The project site is primarily a swath of land within the Mormon Slough channel, extending generally east to west through urbanized Stockton. Mormon Slough flows east to west through the east part of the project site in a relatively narrow well defined low-flow channel. The inlet to a large box culvert is located approximately 320 feet east of the Wilson Way bridge. West of the culvert inlet, Mormon Slough flows are conveyed underground for several miles through downtown Stockton. To the west of the Wilson Way bridge, there is no defined low-flow channel and no evidence of recent surface flows. The project site contains heaps of trash and debris from dumping and homeless encampments, several of which are located within the footprint of construction. Surrounding land uses are primarily residential commercial, and industrial. This portion of Stockton is heavily developed and lands to the north of the site are primarily residential and the lands to the south are primarily industrial.

Existing Vegetation

Portions of Mormon Slough were completely dry during project site visits in 2021, while other areas contained small pockets of water supporting patches of emergent wetland vegetation and other hydrophytes. Adjacent areas are sparsely vegetated with highly disturbed ruderal grasses and weeds, consisting almost entirely of non-native species. Oats, soft chess brome, ripgut brome, foxtail barley, and perennial ryegrass are some of the most common grasses in the ruderal grassland vegetation found within the site. Other grassland species, such as yellow starthistle, bull thistle, morning glory, common sunflower, prickly lettuce, Canadian horseweed, and filaree (*Erodium* spp.) are intermixed with the grasses. There are patches of giant reed and tree-of-heaven within the project site, primarily located along the north fence line in the east part of the site.

Immediately upstream of the box culvert inlet is a low area where water is ponded and is vegetated with common tule and lesser amounts of cattails. Some Mormon Slough flows trickle around the north edge of the box culvert inlet and flow west into a low area between the box culvert inlet and the Wilson Way bridge. This low area supports a dense stand of emergent wetland vegetation, with common tule being the dominant species. To

the east of the emergent wetlands, Mormon Slough is best described as an ephemeral creek, conveying winter rains and summer nuisance water from agricultural lands to the east. Vegetation within and along the low-flow channel includes tall flat sedge and curly dock.

There are also some small seedlings and saplings such as willows, black walnut, and small cottonwoods along the edges of the creek. There are only a few mature trees on the site, including a valley oak and a relatively large gum tree in the east part of the project site. Other trees near the site are primarily ornamental species associated with residences nearby. No blue elderberry shrubs were observed within or adjacent to the project site.

Existing Wildlife

A variety of common bird species were observed in the site. American crow, black phoebe, mourning dove, Brewer's blackbird, and house finch are representative bird species observed on and near the site. All of these are species commonly found in urban areas in the greater project vicinity. There are a few individual trees in and adjacent to or near the project site that are suitable for nesting raptors, including Swainson's hawks.

A variety of mammals are likely to occur in the project site. While no mammals were observed in the site during the recent survey; several California ground squirrel burrows were observed. Species such as raccoon, coyote, black-tailed hare, striped skunk, and Virginia opossum are expected to occur in the greater project vicinity and may wander through the site on occasion. A number of species of small rodents, including mice and voles, also likely occur. Based on habitat types present, only a few amphibian and reptile species are expected to use habitats in the site. Although none were observed, common species such as western fence lizard, Pacific chorus frog, gopher snake, common king snake, and common garter snake are expected to occur at the site.

Wetlands and 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. 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. Some jurisdictional waters of the U.S. also fall under the jurisdiction of CDFW and/or the California Regional Water Quality Control Board (RWQCB). 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.

There are approximately 0.280 acres of intermittent creek and 0.165 acres of emergent wetlands on the site that are potential jurisdictional wetlands or Waters of the U.S. These features are associated with Mormon Slough. Mormon Slough flows into the site from the east and continues west in a relatively narrow channel to the inlet to a large box culvert. This section of Mormon Slough is best described as an ephemeral creek. The emergent wetlands are near the culvert inlet and in a low area between the box culvert inlet and the

Wilson Way bridge. No other areas meeting the technical and regulatory criteria of jurisdictional Waters of the U.S. or wetlands were observed on the site.

Habitat Conservation Plans

The City participates in the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). The SJMSCP, managed by the San Joaquin Council of Governments (SJCOG), is a comprehensive program for assessing and mitigating the biological impacts of converting open space or biologically sensitive lands to urban development in San Joaquin County. It provides three compensation methods: preservation of existing sensitive lands, creation of new comparable habitat on the project site, or payment of fees that would be used to secure preserve lands outside the project site. It also identifies and requires covered projects to abide by Incidental Take Minimization Measures, which are protection measures that avoid direct impacts of development on special-status species (SJCOG 2000). Mormon Slough is in the SJMSCP Category D, Natural Lands Habitat Pay Zone B. Lands beyond Mormon Slough are in the Category A Zone, which is exempt from fee payments.

Environmental Impacts and Mitigation Measures

a) Effects on Special-Status Species.

Special-status species include plant and/or wildlife species that are legally protected under the federal Endangered Species Act, the California Endangered Species Act, or other laws and regulations, or are considered rare enough by the scientific community and trustee agencies to warrant special consideration. These include plant species identified on Lists 1A, 1B and 2 in the Inventory of Rare and Endangered Vascular Plants of California, maintained by the California Native Plant Society.

Table 3 of the biological resource report (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. Table 3 indicates 12 special-status plant species and 17 special-status wildlife species could potentially occur on the project site. Mormon Slough is not considered to provide suitable habitat for all the special-status plant species listed in Table 3.

The project site and surrounding areas may have provided habitat for the special-status wildlife species listed in Table 3 at some time in the past. However, development, and construction and maintenance of roads and utilities, have substantially modified natural habitats within the greater project vicinity, including the project site. Of the special-status wildlife species identified, Swainson's hawk, burrowing owl, tricolored blackbird, and western pond turtle are the only species with potential to occur in the project site on more than a transitory or very occasional basis.

- *Swainson's Hawk.* Swainson's hawk is listed as a threatened species under the California Endangered Species Act. A migratory bird, Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting

of grasslands, irrigated pasture, hay, and wheat crops. The Migratory Bird Treaty Act and the California Fish and Game Code protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). No Swainson's hawks were observed in the site during the recent survey, which was conducted near the beginning of the nesting season of this species. The CNDDB contains several records of nesting Swainson's hawk in the greater project vicinity, including several within a mile of the project site. There are a few suitable nest trees in the site and several large trees in close proximity to the site.

- *Burrowing Owl.* Burrowing owls have been designated a State Species of Concern. They are year-long residents that inhabit a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere. The primary habitat requirement of the burrowing owl is small mammal burrows for nesting, usually in abandoned ground squirrel burrows. The Migratory Bird Treaty Act and California Fish and Game Code protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). No burrowing owls were observed on the project site during the recent survey. Only a few ground squirrel burrows were observed, none of which had evidence of past or current burrowing owl occupancy. This species may utilize habitats in the site for nesting in the future if burrow habitat is available

- *Tricolored blackbird*. Tricolored blackbird is listed as a threatened species under the California Endangered Species Act. Tricolored blackbirds are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries for nesting. Preferred nesting substrates are expansive stands of cattails and tules adjacent to open water. Tricolored blackbirds were not observed on the site during the field survey. Although the patch of tules and cattails identified on the project site is small and surrounded by development, tricolored blackbirds could potentially nest in that area.

- *Western Pond Turtle.* The western pond turtle has been designated a State Species of Concern. Western pond turtles are associated with permanent or nearly permanent bodies of water with adequate basking sites such as logs, rocks, or open mud banks. Pond turtles construct nests in sandy banks along slow-moving streams and ponds in the spring and the young usually hatch in two to three months. There are no records of western pond turtle in the CNDDB search area, and Mormon Slough is ephemeral and is dry much of the year. However, western pond turtles are known to occur in similar drainages in the general region and could potentially swim and bask within Mormon Slough if adequate aquatic conditions are met. Also, although the grasslands surrounding the slough are highly disturbed, this species could potentially nest in upland habitats near the creek.

The special-status birds could be disturbed by noise if they nested in or near the project site during construction. Western pond turtle could be disturbed if it is present within Mormon Slough or nested adjacent to the slough during project construction. These would be potentially significant impacts.

As noted, the project site is subject to the SJMSCP. Standard take avoidance measures outlined in the SJMSCP for nesting Swainson's hawks and burrowing owl would be required. These would include pre-construction surveys for nesting Swainson's hawks within 0.5 miles of the site for construction activities between March 1 and September 15 and pre-construction surveys for nesting burrowing owls within 250 feet of the site for construction activities between February 1 through August 31. If active nests are found, temporal restrictions on construction that are specified in the SJMSCP will be required.

Standard take avoidance measures outlined in the SJMSCP for nesting tricolored blackbirds may be required. These would include pre-construction surveys for construction activities during the nesting season. If active nests are found, a 500-foot construction setback from the nests would be required until nesting is complete. Although there is a lack of suitable habitat for western pond turtle, standard Take Avoidance measures for this species as outlined in the SJMSCP, primarily consisting of pre-construction surveys, may be required.

For CEQA purposes, a project that complies with the SJMSCP can be deemed to result in biological resource impacts that are less than significant. Implementation of the mitigation measure below would reduce potential impacts on special-status species to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-1: The City shall apply to the San Joaquin Council of Governments (SJCOG) for coverage under the San Joaquin County Multi-Species Open Space and Habitat Conservation Plan (SJMSCP). The project site shall be inspected by the SJMSCP biologist, who will recommend which Incidental Take Minimization Measures (ITMMs) set forth in the SJMSCP shall be implemented. The project applicant shall pay the required SJMSCP fee, if any, and be responsible for the implementation of the specified ITMMs.

Significance After Mitigation: Less than significant

b) Riparian and Other Sensitive Habitats.

The project site is adjacent to Mormon Slough, a natural stream which could potentially support a well-developed riparian area. However, as noted, the biological resource assessment indicated that the project site is within an area covered mainly by grasses and weeds. There are few mature trees on the project site. No other sensitive habitats, such as vernal pools and blue elderberry shrubs, were identified. The biological resource assessment stated that on-site habitats are highly disturbed and biologically

unremarkable. Project impacts on riparian and other sensitive habitats would be less than significant.

c) State and Federally Protected Wetlands.

As noted, the biological resources assessment identified approximately 0.280 acres of intermittent creek and 0.165 acres of emergent wetlands on the project site that are potential jurisdictional wetlands or Waters of the U.S. Construction of the project is anticipated to involve 0.11 acres of temporary impacts to jurisdictional Waters of the U.S. and wetlands.

A Section 404 permit, issued by the U.S. Army Corps of Engineers, would be required prior to the placement of any fill material (e.g., culverts, fill dirt, rock) in Mormon Slough. As the estimated fill in Waters of the U.S. is expected to be 0.11 acres, the work would likely be authorized under a Nationwide Permit rather than a regular Section 404 permit. Permits would also be required from CDFW (Section 1600 Streambed Alteration Agreement), the RWQCB (Clean Water Act Section 401 Water Quality Certification), and the Central Valley Flood Protection Board (encroachment permit). These requirements are specified in the mitigation presented below. Implementation of this mitigation measure would reduce project impacts on wetlands or Waters of the United States to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

BIO-2: Prior to the start of construction work, the City shall obtain an appropriate permit from the U.S. Army Corps of Engineers (Corps). As part of the permit process, the Corps shall verify delineations identifying jurisdictional Waters of the U.S. and wetlands. The delineations shall be used to determine if any project work will encroach upon any jurisdictional water, thereby necessitating an appropriate permit. Depending on the Corps permit issued, the City shall also apply for a Section 401 Water Quality Certification from the Central Valley Regional Water Quality Control Board.

BIO-3: Prior to the start of construction work, the City shall obtain any necessary permits from the California Department of Fish and Wildlife and the Central Valley Flood Protection Board. The City shall comply with all conditions attached to any required permit.

Significance After Mitigation: Less than significant

d) Fish and Wildlife Movement.

The biological resources assessment identified most of Mormon Slough along the project site as an ephemeral stream, containing water only from winter rains and summer water from agricultural lands to the east. Because of this, Mormon Slough does not provide suitable aquatic habitat for fish and therefore would not be considered a fish migratory

corridor. However, the biological resources assessment stated that trees, shrubs, and grasslands in and near the project site could be used by birds protected by the Migratory Bird Treaty Act and/or Fish and Game Code of California, such as white-tailed kite, loggerhead shrike, and red-winged blackbird. While none of these species were found on the project site, The biological assessment noted that there are several trees in the project vicinity that are suitable for nesting raptors and other protected bird species.

Participation in the SJMSCP, as required by Mitigation Measure BIO-1, would require implementation of standard take measures for nesting birds within 14 days of the start of construction. If active nests are found, then restrictions on construction specified in the SJMSCP would be required. Implementation of Mitigation Measure BIO-1 would reduce impacts on migratory birds and their nests to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measure BIO-1.

Significance After Mitigation: Less than significant

e) Local Biological Resource Requirements.

Stockton Municipal Code Chapter 16.130 addresses Heritage Trees, which are any valley oak, coast live oak, and interior live oak tree with a trunk diameter of 16 inches or more, measured at 24 inches above actual grade. Except for an emergency, removal of any Heritage Tree requires a City permit, regardless of location on a property or condition of the tree(s). While the biological resources assessment identified a valley oak at the east part of the project site, it did not indicate that the project would affect this oak. Therefore, Stockton Municipal Code Chapter 16.130 would not apply to this project. No other biological resource requirements would apply to this project. The project would have no impact related to local biological resource requirements.

f) Conflict with Habitat Conservation Plans.

As noted, the City would participate in the SJMSCP, as required by Mitigation Measure BIO-1. The project would comply with applicable provisions and measures of the SJMSCP. No other habitat conservation plans apply to the project site. Project impacts related to habitat conservation plans would be less than significant with mitigation.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measure BIO-1.

Significance After Mitigation: 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 pursuant to Section 15064.5?				✓
b) Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to Section 15064.5?		✓		
c) Disturb any human remains, including those interred outside of formal cemeteries?			✓	

NARRATIVE DISCUSSION

Information for this section is provided by a Cultural Resources Inventory and Evaluation Report prepared by Solano Archaeological Services, unless otherwise cited. Appendix C contains a copy of this report. The report was based on background research conducted through the Central California Information Center of the California Historical Resources Information System, additional archival research by Solano Archaeological Services, and a field survey of the project site on April 9, 2021.

Environmental Setting

Stockton has more than 1,900 recorded cultural resources, ranging from prehistoric habitation sites to mid-20th century developments (City of Stockton 2018b). The project site is generally considered to be in Northern Valley Yokuts territory. Section 3.18, Tribal Cultural Resources, discusses the Yokuts in more detail.

Euro-American contact began with infrequent excursions by Spanish explorers traveling through the Sacramento-San Joaquin Valleys in the late 1700s to early 1800s. The Spanish, and later Mexican, governments of California tried to encourage settlement by awarding large plots of land, called ranchos, to prominent men. The project site was part of one such grant, Charles M. Weber's El Campo de los Franceses. Weber founded the City of Stockton in 1850, and the City incorporated that same year. With the Gold Rush, the town grew rapidly. As the Gold Rush boom eventually receded, further growth was spurred with the establishment of the railroads. The San Francisco & San Joaquin Valley Railroad Company began construction from Stockton to Bakersfield in 1895. Its tracks are located just to the north and east of the project site and are presently operated by the Burlington Northern Santa Fe Railroad. Stockton's growth continued throughout the 20th century with the city becoming a rail, water, and highway transportation hub linking the Central Valley's agricultural fields and other industries to national and world markets.

The Stockton General Plan EIR identified City-designated cultural resources but none on the project site. The records search by the Central California Information Center indicated that no cultural resources have been documented within the project site,

although it did find the presence of 14 known historic-era sites and features within a half-mile search area. The field survey found no historic-era archaeological sites, features, or artifacts within or adjacent to the project site.

Stockton Municipal Code Section 16.36.050 states that if a historical or archaeological resource or human remains may be impacted by a development project requiring a discretionary land use permit, the Secretary of the Cultural Heritage Board shall be notified, any survey needed to determine the significance of the resource shall be conducted, and the proper environmental documents shall be prepared. In addition:

A. Historical Resources. Resources that have been identified as a landmark or part of a historic district in compliance with Chapter 16.220 (Cultural Resources) shall require a certificate of appropriateness (Section 16.220.060) if any exterior changes to the resource are proposed.

B. Archaeological Resources. In the event that archaeological resources are discovered during any construction, construction activities shall cease, and the Community Development Department (Department) shall be notified so that the extent and location of discovered materials may be recorded by a qualified archaeologist, and disposition of artifacts may occur in compliance with State and federal law.

C. Human Remains. In the event human remains are discovered during any construction, construction activities shall cease, and the County Coroner and Director shall be notified immediately in compliance with CEQA Guidelines 15064.5 (d). A qualified archaeologist shall be contacted to evaluate the situation. If the human remains are of Native American origin, the Coroner shall notify the NAHC [Native American Heritage Commission] within 24 hours of this identification. The NAHC will identify the most likely descendent of the Native American to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Environmental Impacts and Mitigation Measures

a) Historical Resources.

As noted above, the records search by the Central California Information Center indicated that no cultural resources have been documented within the project site. The field survey found no historic-era archaeological sites, features, or artifacts within or adjacent to the project site. Based on these results, the project would have no impact on historical resources.

b) Archaeological Resources.

The Central California Information Center search found no record of any archaeological resources on the project site. The field survey likewise found no prehistoric-era archaeological sites, features, or artifacts within or adjacent to the project site. Given these results, the Solano Archaeological Services report concluded that the project site

has only a low-moderate level of sensitivity for encountering traces of early Native American habitation, activities, and human interments.

However, it is possible that project construction could encounter archaeological materials that not been previously discovered. Procedures to address archaeological discoveries if they should occur during construction are set forth in the mitigation measure below, consistent with Stockton Municipal Code Section 16.36.050. Implementation of this mitigation measure would reduce cultural resource impacts to a level that would be less than significant. Refer to Section 3.18, Tribal Cultural Resources, for an analysis of potential project impacts on tribal cultural resources.

Level of Significance: Potentially significant

Mitigation Measures:

CULT-1: If any subsurface archaeological resources are encountered during construction, all construction activities within a 50-foot radius of the encounter shall be immediately halted until a qualified archaeologist can examine these materials, initially evaluate their significance and, if potentially significant, recommend measures on the disposition of the resource. Recommended measures could include, but are not limited to, 1) preservation in place, or 2) excavation, recovery, and curation by qualified professionals. The Public Works Department shall be notified, and the contractor shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the Public Works Department, consistent with the requirements of the CEQA Guidelines.

Significance After Mitigation: Less than significant

c) Human Burials.

As noted in b) above, the project site has only a low-moderate level of sensitivity for exhibiting traces of early Native American human interments. However, it is possible that human remains, specifically those of Native American origin, could be encountered during project construction.

CEQA Guidelines Section 15064(e) sets forth procedures to be followed should any human remains be uncovered, with special requirements for burials determined to be Native American. Also, Stockton Municipal Code Section 16.36.050 has provisions related to the discovery and disposition of human remains. Compliance with these regulations would reduce impacts related to human burials to a level that would be less than significant. Refer to Section 3.18, Tribal Cultural Resources, for further discussion of potential impacts on tribal cultural resources, including Native American burials.

3.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?			✓	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

NARRATIVE DISCUSSION

Environmental Setting

Electricity is a major energy source for residences and businesses in California. In San Joaquin County, based upon the most recent information available, electricity consumption in 2019 totaled approximately 5,583 million kilowatt-hours, of which approximately 1,893 million kilowatt-hours were consumed by residential uses and the remainder by non-residential uses (CEC 2021a). In 2019, natural gas consumption in San Joaquin County totaled approximately 259 million therms, of which approximately 89 million therms were consumed by residential uses and the remainder by non-residential uses (CEC 2021b). Motor vehicle use also accounts for substantial energy usage. The SJCOG estimated countywide daily VMT was 17,868,785 miles in 2015, which led to the consumption of approximately 511 million gallons of gasoline and diesel fuel (SJCOG 2018).

Environmental Impacts and Mitigation Measures

a) Project Energy Consumption.

Project construction would involve fuel consumption and use of other non-renewable resources. Construction equipment for such improvements typically consumes diesel fuel or gasoline. The same fuels typically are used for vehicles that transport equipment and workers to and from a construction site. Construction-related fuel consumption would, however, be finite, short-term, and consistent with construction activities of a similar character. This energy use would not be considered wasteful, inefficient or unnecessary.

Electricity may be used for equipment operation during construction activities. It is also expected that more electrical construction equipment would be used in the future, as it would generate fewer air pollutant emissions. This electrical consumption would be consistent with construction activities of a similar character; therefore, the use of electricity in construction activities would not be considered wasteful, inefficient, or unnecessary, especially since fossil fuel consumption would be reduced.

Project operations are expected to use little to no energy, mostly limited to fuels consumed by vehicles used to infrequently inspect the site. Overall, the project is not expected to consume energy in a manner considered wasteful, inefficient, or unnecessary. Project impacts related to energy consumption would be less than significant.

b) Consistency with Energy Plans.

The City does not have adopted plans specifically for renewable energy or energy efficiency. As discussed in a) above, the project is not expected to lead to wasteful, inefficient, or unnecessary consumption of energy. The project would have no impact related to energy plans.

3.7 GEOLOGY AND SOILS

Would the project:

a) Directly or indirectly cause 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 a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			✓	
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?				✓
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		

NARRATIVE DISCUSSION

Environmental Setting

The project site in the San Joaquin Valley in central California near the Sacramento-San Joaquin River Delta. The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. The sediments that form the Valley floor were derived largely from erosion of the Sierra Nevada. The Geologic Map of the San Francisco-San Jose Quadrangle designates the underlying geology of the project site as the Modesto Formation (Wagner et al. 1991). The Modesto Formation consists primarily of sand, silt, and clay seams deposited by rivers, and it ranges in depth from 10 to 200 feet (DWR 2014).

The general topography of the project vicinity is essentially flat. The project site itself includes steeper banks that transition from the higher elevation lands down to the Mormon Slough channel. Custom soil surveys downloaded from the Natural Resources Conservation Service website indicates there are two soil types underlying the project site (SCS 1992; NRCS 2020):

- 181, Jacktone-Urban land complex, 0 to 2 percent slopes. This nearly level unit, approximately 50 percent Jacktone clay and 35 percent Urban land, is in basins. Jacktone clay is moderately deep to a hardpan and is poorly drained. Permeability and runoff of Jacktone clay are slow, and the water erosion hazard is slight. The shrink-swell potential is high. The soil material under Urban land is similar to that of Jacktone clay.

- 280, Yellowlark gravelly loam, 2 to 5 percent slopes. This moderately well-drained, nearly level soil is on stream terraces. The soil is deep to a hardpan. Permeability is moderately slow in the upper part and very slow near the hardpan. Runoff is very slow, and the water erosion hazard is slight. The shrink-swell potential ranges from low to high, depending on soil depth.

There are no active or potentially active faults in the Stockton vicinity. The Stockton Fault is a south-dipping reverse fault that trends east-west across the Stockton area, but it has not been classified as an active fault by the California Geological Survey. The nearest active fault is the Greenville Fault, approximately 22 miles west-southwest of Stockton (City of Stockton 2018b). Portions of the Concord-Green Valley and Hayward fault zones, 35 and 50 miles west of Stockton, and the Calaveras fault zone, approximately 40 miles southwest of Stockton, have also been rated as active within the last 200 years. The project site, along with the rest of San Joaquin County, is subject to seismic shaking from these fault zones, as well as the San Andreas Fault farther to the west (San Joaquin County 2016).

Paleontological resources are fossils or groups of fossils that are unique, unusual, rare, uncommon, or important, and those that add to an existing body of knowledge in specific areas. Only a handful of specimens are within the Stockton General Plan Planning Area, and those are identified as relatively recent (City of Stockton 2018b). However, records

of vertebrate fossils have been related to the Modesto Formation, which underlies the project site.

Environmental Impacts and Mitigation Measures

a-i) Fault Rupture Hazards.

As noted, there are no active or potentially active faults within or near the project site. The project site is not within or near a designated Alquist-Priolo Earthquake Fault Zone (California Geological Survey 2015). The project would have no impact related to fault rupture.

a-ii) Seismic Ground Shaking.

The project site is potentially subject to seismic shaking from active faults outside San Joaquin County. The City of Stockton has Standard Specifications for the installation of sanitary sewer lines. Implementation of these Standard Specifications would minimize the effects of seismic shaking on the sanitary sewer line. Seismic ground shaking impacts would be less than significant.

a-iii) Seismic-Related Ground Failure.

Geologic hazards include such phenomena as liquefaction and subsidence. Liquefaction generally occurs in areas where moist, fine-grained, cohesionless sediment or fill materials are subjected to strong seismic ground shaking. Under certain circumstances, seismic ground shaking can temporarily transform an otherwise solid, granular material to a fluid state. Neither the California Geological Survey nor the U.S. Geological Survey has mapped any liquefaction hazard zones in the Stockton area (City of Stockton 2018b).

Subsidence is the sinking of a large area of ground surface in which the material is displaced vertically downward, with little or no horizontal movement. Subsidence is not anticipated in the project vicinity.

As noted in a-ii) above, the City of Stockton has Standard Specifications, the implementation of which would minimize the effects of potential ground failure on the sanitary sewer line. Impacts related to ground failure would be less than significant.

a-iv) Landslides.

The project site is in a topographically flat area. In addition, the project would be installed underground and therefore would not be affected by any landslides or other surface earth movement that may occur. The project would have no impact related to landslides.

b) Soil Erosion.

The construction and grading associated with site preparation and construction of the project would temporarily increase the exposure of soils on the project site to water and wind erosion. Since construction activities would disturb more than an acre of land area, the project would need to obtain a Construction General Permit from the SWRCB. The

Construction General Permit would require preparation of a Storm Water Pollution Prevention Plan (SWPPP) by a Qualified SWPPP Developer. The SWPPP would include implementation of Best Management Practices (BMPs) to avoid or minimize adverse water quality impacts from erosion and sedimentation. BMPs fall within the categories of Temporary Soil Stabilization, Temporary Sediment Control, Wind Erosion Control, Tracking Control, Non-Storm Water Management, and Waste Management and Materials Pollution Control.

Also, as discussed in Section 3.4, Biological Resources, work in and adjacent to Mormon Slough would be required to obtain several permits, including a Corps of Engineers Section 404 permit, a Section 401 Water Quality Certification from the Regional Water Quality Control Board, and a Lake and Streambed Alteration Agreement from the California Department of Fish and Wildlife. These permits typically have conditions attached that are designed to avoid or minimize impacts on the water quality of the streams in which work would be conducted, including measures to reduce ground disturbance. Project impacts related to soil erosion would be less than significant.

c) Geological Instability.

Existing soil and geological conditions are similar to those throughout most of Stockton. The project site is topographically flat, so no on- or off-site landslides or lateral spreading would occur. As noted in a-iii) above, subsidence and liquefaction are unlikely to occur. As noted in a-ii) above, the City of Stockton has Standard Specifications, the implementation of which would minimize the effects of potential geologic instability on the sanitary sewer line. Project impacts related to geological instability would be less than significant.

d) Expansive Soils.

Project construction work would occur in soils with high expansive (shrink-swell) potential. Project work would follow City of Stockton Standard Specifications, which would minimize the potential for expansive soils to affect street construction. Project impacts related to expansive soils would be less than significant.

e) Adequacy of Soils for Sewage Disposal.

The project is the replacement of a sanitary sewer line. The project would not generate wastewater; therefore, no onsite sewage disposal systems would be required. The project would have no impact related to soil adequacy for sewage disposal.

f) Paleontological Resources.

The Modesto Formation underlying the project site has been a source of paleontological resources. Given project vicinity development and the lack of resources identified in the Stockton area, it is unlikely that intact paleontological resources would be encountered. However, it is conceivable that currently unknown paleontological resources could be uncovered during project construction. Mitigation described below would require work to be stopped when paleontological resources are uncovered until these resources can be evaluated by a qualified paleontologist and recommendations made for their proper

disposition. Implementation of this mitigation measure would reduce paleontological resource impacts to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

GEO-1: If any paleontological resources are encountered during project construction, all activities shall be halted within 50 feet of the discovery until a qualified paleontologist can examine these materials, determine their significance and, if significant, recommend 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. The project applicant shall be responsible for retaining qualified professionals, implementing recommended mitigation measures, and documenting mitigation efforts in a written report to the Public Works Department, consistent with the requirements of the CEQA Guidelines.

Significance After Mitigation: Less than significant

3.8 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

A GHG is a gas that absorbs and emits radiation within the thermal infrared range, trapping heat in the earth's atmosphere. There are several types of GHGs, which are both naturally occurring and generated by human activity. Increased atmospheric concentrations of GHGs are considered a primary contributor to global climate change, which is a subject of concern for the State of California. Potential climate change impacts occurring in the San Joaquin Valley include more intense and frequent heat waves, higher

frequency of catastrophic floods, more intense and frequent drought, and more severe and frequent wildfires (Westerling et al. 2018).

GHG emissions in California in 2018, the most recent year for which data are available, were estimated at approximately 425 million metric tons CO_2e – a decrease of approximately 13% from the peak level in 2004. Transportation was the largest contributor to GHG emissions in California, with approximately 40% of total emissions. Other significant sources include industrial activities, with approximately 21% of total emissions, and electric power generation, both in-state and imported, with approximately 15% of total emissions (ARB 2020). Total GHG emissions from Stockton in 2005 were an estimated 2,360,932 metric tons CO_2e. Of the total emissions, approximately 48% percent came from on-road transportation and 33% came from building energy use (City of Stockton 2014).

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. Nevertheless, the U.S. Environmental Protection Agency 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 has implemented GHG emission reduction strategies 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 2016, Senate Bill (SB) 32 became law. 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 adopted an updated Scoping Plan that sets forth strategies for achieving the SB 32 target, which is 260 million metric tons CO_2e. The updated Scoping Plan continues 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, along with a proposed 20% reduction in GHG emissions from refineries. 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 City of Stockton adopted a Climate Action Plan (CAP) in 2014. The CAP sets a GHG emission reduction target of 10% below 2005 GHG emission levels by 2020, or approximately 20.6% below 2020 "business as usual" GHG emissions (i.e., 2020 GHG emissions that are unmitigated), which is the level by which the State has set its emission reduction goal. Approximately 83% of the reductions needed to achieve the City's GHG reduction goal are achieved through state-level programs, and 17% are achieved through City-level programs. The largest GHG reductions identified are in building energy (both energy efficiency and renewable energy), transportation, and waste (City of Stockton 2014). At this time, the City has no CAP for beyond 2020, although it does plan to update the community GHG inventory.

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

GHG emissions from project construction were estimated using the RCEM in conjunction with the analysis of air quality impacts; modeling results are displayed in Appendix A of this IS/MND.

Construction GHG emissions were estimated at approximately 41.2 metric tons CO_2e, assuming a three-month continuous construction period (see Section 3.3, Air Quality). Construction emissions are temporary and would cease when project work is completed. Project operations would not generate any GHG emissions; therefore, the project would not conflict with the objectives of adopted State and City GHG reduction plans. Project impacts related to GHG emissions and GHG reduction plans would be less than significant.

3.9 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 or excessive noise for people residing or working in the project area?				✓
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		✓		
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			✓	

NARRATIVE DISCUSSION

Environmental Setting

Hazardous material sites of all statuses are recorded in the GeoTracker database, maintained by the SWRCB, and the EnviroStor database, maintained by the Department of Toxic Substances Control (SWRCB 2020, DTSC 2020). A search of both databases showed no active hazardous materials sites have been recorded in the vicinity, except for one denoted as "needing evaluation." Many previously recorded sites in the project vicinity have been cleaned up and their cases now closed.

The one site designated as "needing evaluation" is the Martin Metal Finishing site, on 1250 South Wilson Way. The Martin Metal Finishing site, operations on which had ceased in 1989, had been designated by EnviroStor as a site that is inactive but needs evaluation. The site was entered as a potential Superfund site due to a report of an illegal discharge of wastewater into the storm drain leading to Mormon Slough. Storm drain and slough soil samples indicated elevated levels of chromium, lead, and zinc. An investigation of the Martin Metal Finishing in 1999, conducted by the Department of Toxic Substances Control at EPA, concluded that the site did not qualify for further remedial site assessment under Superfund. The reason for this was a lack of a threat to human health (EPA 1999). Notably, the GeoTracker database has no record of this site, even though the Central Valley RWQCB had been actively participating in the investigation of the Martin Metal Finishing site.

Various federal and State laws and regulations cover the transportation, storage, and disposal of hazardous materials. The Unified Hazardous Waste and Hazardous Management Regulatory Program, enacted in 1993, is a state and local effort to consolidate, coordinate, and make consistent existing programs regulating hazardous waste and hazardous materials management. The Unified Program is implemented at the local level by a Certified Unified Program Agency. The San Joaquin County Environmental Health Department was approved by the State as the Certified Unified Program Agency for the County and its incorporated cities. The County Environmental Health Department has the primary responsibility to enforce most regulations regarding hazardous materials in the area, while the Stockton Fire Department Hazardous Materials Team acts as first responder to hazardous material incidents.

Environmental Impacts and Mitigation Measures

a) Hazardous Material Transportation, Use, and Storage.

The project proposes improvements to an existing street. Once the improvements are completed, the project would not require the use or storage of any materials considered hazardous on the project site. Transportation of hazardous materials may occur on Wilson Way and other local streets; however, this transport is part of existing conditions, and the hazardous materials transported are in relatively small amounts for adjacent commercial and light industrial uses. The project would not generate an increase in the transport of

these materials. The project would have no impact on the transportation, use, or storage of hazardous materials.

b) Upset and Accident Conditions.

Construction activities on the project site may involve the use of hazardous materials typical for such activities, such as fuels and solvents, and thus create a potential for hazardous material spills. Construction and maintenance vehicles would transport and use fuels in ordinary quantities. Fuel spills, if any occur, would be minimal and would not typically have significant adverse effects. In accordance with SWPPP requirements (see Section 3.7, Geology and Soils), contractors have absorbent materials at construction sites to clean up minor spills. Work in the vicinity of the Mormon Slough channel has the potential for fuel or other hazardous material spills into this surface water. Work areas and drainage from these areas need to be isolated from the channel at all times as provided in the mitigation described below.

Level of Significance: Potentially significant

Mitigation Measures:

HAZ-1: Construction activity in the vicinity of the Mormon Slough channel shall at all times be isolated from any wetted portion of the channel, so as to prevent any potential contamination from surface runoff or liquid materials spilled within the construction area. The project shall comply with applicable requirements of all State and federal agency permits related to construction of the project.

Significance After Mitigation: Less than significant

c) Release of Hazardous Materials near Schools.

There are no schools within one-quarter mile of the project site. The nearest school is Spanos Elementary School, approximately one-half mile northwest of the western terminus of the project site. As noted in a) above, the project would not use or store hazardous materials when completed. The project would have no impact related to releases of hazardous materials near schools.

d) Hazardous Material Sites.

As noted, the Martin Metal Finishing site was recorded as inactive but needing evaluation. An investigation had been conducted, and the EPA concluded that it needed to take no further action, as the site does not qualify as a Superfund site. However, there is no indication that previously identified contamination has been remediated. Therefore, construction work in the vicinity of this site could potentially encounter soil contamination, which may cause adverse health effects on workers and potentially nearby land uses. Mitigation presented below would require an assessment of potential soil contamination near the hazardous material site and further action if contamination is encountered. Implementation of this measure would reduce impacts related to hazardous material sites to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

HAZ-2: Prior to the start of construction on the Mormon Slough portion of the project alignment within 400 feet of Wilson Way, a Phase I Environmental Site Assessment shall be conducted to determine whether and where potential soil contamination may exist within the project alignment. Where the assessment indicates the potential presence of soil contamination, additional investigation and testing shall be conducted to identify areas of contamination that could pose a risk to human health. Any such contaminated area identified shall be remediated in accordance with applicable State and local regulations pertaining to the contaminant.

Significance After Mitigation: Less than significant

e) Public Airports.

The nearest public airport, Stockton Metropolitan Airport, is approximately three miles to the south. The project site is not within any of the airport's safety zones, and it is outside the Airport Influence Area, as indicated in the airport's Land Use Compatibility Plan (Coffman Associates 2016). The project would not place residents or businesses in an area potentially subject to hazards from airport operations. The project would have no impact related to public airports.

f) Emergency Response and Evacuations.

Construction of the proposed project will require vehicle and construction equipment access between local roads and the project site. It is anticipated that most of this activity would occur outside the public street system and would be managed from a centrally-located contractor staging area (Figure 2-1). As a result, the project could involve very short-term impacts on traffic and circulation on streets in the immediate vicinity of the site. Project construction would not be expected to substantially inhibit access for emergency vehicles to surrounding land uses in the project vicinity.

In the event the project would involve substantial effects on public street circulation, the contractor will need to prepare and implement a Traffic Control Plan, as required by the mitigation measure below, reducing potential impacts to less than significant. Following completion, the project would have no effect on traffic circulation in the project vicinity.

Level of Significance: Potentially significant

Mitigation Measures:

HAZ-3: Prior to the start of work in Sierra Nevada Street, the contractor shall prepare and implement a Traffic Control Plan in coordination with the Stockton Public Works, Police, and Fire Departments. The Traffic Control Plan shall address the routing of emergency vehicles, truck

routing, and handling of pre-project daily traffic volumes as required during the construction period. It also shall address access to adjacent properties, pedestrian and bicycle safety provisions, and notification in advance of any street and driveway closures. The contractor shall specify dates and times of road closures or restrictions, if any, and shall ensure that adequate access will be provided for emergency vehicles.

Significance After Mitigation: Less than significant

g) Wildland Fire Hazards.

The project site is within a developed urban area; the Mormon Slough channel is within an open space area that could be prone to wildfire but is infrequently maintained to minimize wildfire risk. Project construction activities, including operation of construction equipment, storage of combustible materials and waste, or disposal of cigarettes would involve some fire risk. Construction plans and specifications would include provisions to reduce fire hazards, such as disposal of combustible waste, use of spark arrestors, storage of combustible materials away from sites, and prohibitions on smoking. With these provisions, project impacts related to wildland fire hazards would be less than significant. Section 3.20, Wildfire, discusses wildfire impacts in more detail.

3.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		✓		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river runoff or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site?				✓
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				✓
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of				✓

polluted runoff?				
iv) Impede or redirect flood flows?				✓
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The proposed project is located along Mormon Slough. Most of historical Mormon Slough, originating near Bellota, has been incorporated into the Stockton Diverting Canal, which diverts most of the flow of the Calaveras River at Bellota. The remaining section of Mormon Slough, from the Stockton Diverting Canal to its confluence with the San Joaquin River, is an intermittent stream that has been improved as a flood control channel, including the segment adjacent to the project site. Mormon Slough is the southern and main distributary branch of the Calaveras River and carries most of the river's usual flow, and the slough is the terminal drainage for east-central Stockton and the adjoining agricultural areas to the east. Mormon Slough discharges into the Stockton Deep Water Channel, which in turn discharges into the San Joaquin River.

In the project vicinity, Mormon Slough is contained in a floodplain channel approximately 50 to 100 feet wide, which is bounded on the north and south by elevated banks and depressed below the existing grade of surrounding developed lands by the same amount. When not in high flow condition, surface flow in Mormon Slough is conducted to and through a concrete box culvert which begins just east of the Wilson Way bridge and extends west to a point well outside the project area. Both upstream and downstream of the box culvert, the slough channel and vicinity in the project vicinity has been substantially altered by past construction and maintenance activities as well as homeless occupation. There are no other streams or other surface waters in the vicinity of the site.

The project site is within the Eastern San Joaquin County Groundwater Subbasin of the San Joaquin Valley Groundwater Basin. According to the most recent information available, groundwater in the project area is approximately 40-50 feet below ground surface (San Joaquin County FCD 2016). Recharge to the groundwater system in the Stockton area primarily is from percolation of irrigation return water, precipitation, seepage from reservoirs and rivers, and urban runoff.

Potential flooding hazards are designated on maps prepared by the Federal Emergency Management Agency (FEMA). FEMA maps focus on areas potentially subject to inundation by a 100-year flood (i.e., a flood of such magnitude that occurs on average once every 100 years). According to FEMA Map Panel 06077C0460F, the area within

the banks of Mormon Slough is in Zone A, which designates the 100-year flood area and is determined to be a Special Flood Hazard Area. The portion of the project site outside Mormon Slough and its banks is in Zone X, which indicates the project site is at reduced risk from a 100-year flood due to a levee (FEMA 2009)

SB 5 and related State legislation requires future development to consider the 200-year flood event (i.e., a flood of such magnitude that occurs on average once every 200 years) within certain Central Valley geographies, with a focus on areas subject to a 200-year flood of three feet or more in depth. Based on information in the Stockton General Plan, the project site would not be subject to a 200-year flood at a depth of three feet or greater (City of Stockton 2018a).

Environmental Impacts and Mitigation Measures

a) Water Quality.

The project site is mostly within the Mormon Slough flood channel and parallels and crosses the waterway, which flows intermittently. Project construction would involve deep excavation, spoil storage, and other earth moving activity within an estimated 40-foot-wide disturbance corridor paralleling, and at certain locations crossing, the Mormon Slough waterway. The project would involve substantial exposure of uncompacted soil to rainfall erosion and unless confined to the construction area losses of sidecast soil to the nearby waterway.

Project construction would need to be carefully planned, designed, and constructed to minimize potential risk of soil erosion and sediment deposition in Mormon Slough. This can be accomplished by preparation of a project-specific Water Quality Control Plan which identifies specific water quality control measures such as grading away from the watercourse along the construction pathway, placement of sidecast and soil storage areas, installation of erosion control devices such as straw wattles and silt fences. The Water Quality Control Plan would be integrated with Construction General Permit requirements and applicable requirements of the U.S. Army Corps of Engineers Section 404 permit, the Section 401 Water Quality Certification from RWQCB, and the CDFW Lake and Streambed Alteration Agreement (See Section 3.4, Biological Resources). These permits typically include conditions that are designed to avoid or minimize impacts on water quality of the streams. These actions would reduce potential water quality impacts in Mormon Slough to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

HYDRO-1: A Water Quality Control Plan shall be prepared for the project which shall identify project-specific water quality control measures that will minimize potential for erosion and sedimentation of the Mormon Slough waterway. The Plan shall include identification of construction units that can be hydrologically isolated from the

waterway by grading or placement of soil; and the placement, maintenance and periodic inspection of erosion control devices.

The requirements of the Water Quality Control Plan shall be integrated with Construction General Permit requirements and applicable requirements of the US Army Corps of Engineers Section 404 permit, the Section 401 Water Quality Certification from RWQCB, and the CDFW Lake and Streambed Alteration Agreement.

Significance After Mitigation: Less than significant

b) Groundwater Supplies and Recharge.

The project would not require the use of water; therefore, it would not place demands on groundwater supplies used by the City or other agencies. The project would not increase or substantially modify existing development and paved surfaces in the vicinity, so the project would not change existing recharge conditions, which are minimal. The project would have no impact on groundwater supplies or recharge.

c-i, ii) Drainage Patterns.

The project would involve substantial grading and excavation within the Mormon Slough channel during project construction. Construction would occur outside of the typical rainy season, during which Mormon Slough could have substantial flow. After construction is completed, the ground surface would be restored to its existing condition. Therefore, the project would result in no impact on existing drainage patterns.

c-iii) Runoff.

As noted in b) above, existing development and pavement areas on and in the vicinity of the project site would not be modified by the project. Therefore, the project would not result in any substantial changes in runoff volumes. The project would have no impact on runoff.

c-iv) Flood Flows.

As noted, the FEMA map for the project site designates the site within Zone X, which indicates the project site is at reduced risk from a 100-year flood due to a levee. FEMA generally designates areas at risk from a 100-year flood within Zone A, or a variant thereof. Since the project site is not within Zone A, it is not considered by FEMA standards to be within a special flood hazard area. Also as noted, the project site is not within a designated 200-year floodplain that would flood at least three feet in depth. The project would not change existing flood risks, especially since there would be no change in runoff volumes, as noted in c-iii) above. The project would have no impact related to flooding hazards.

d) Release of Pollutants in Flood, Tsunami, or Seiche Zones.

As described in c-iv) above, the project site is not within a 100-year floodplain or a 200-year floodplain that would flood to a depth of at least three feet. The project is not near any large bodies of water, so it would not be subject to seiches or tsunamis. The project would not introduce any hazardous materials that could be released in quantities that would contaminate any flood flows (see Section 3.9, Hazards and Hazardous Materials). The project would have no impact related to release of pollutants in flood, tsunami, or seiche zones.

e) Conflicts with Water Quality or Groundwater Management Plans.

As noted in a) above, the project would be subject to the City's MS4 permit program, which is designed to minimize impacts on water quality. In 2014, the California Legislature passed the Sustainable Groundwater Management Act, part of which requires groundwater sustainability plans for critically overdrafted basins to be adopted by January 31, 2020. The Eastern San Joaquin County Groundwater Subbasin is designated a critically overdrafted basin, and a groundwater sustainability plan for the Subbasin was submitted to the California Department of Water Resources on January 29, 2020. As noted in a) and b) above, the project would not affect groundwater resources or supplies. Project impacts related to water quality or groundwater management plans would be less than significant.

3.11 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) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			✓	

NARRATIVE DISCUSSION

Environmental Setting

The project site is within a developed urban area of southern Stockton, with Mormon Slough crossing the area. The immediate project vicinity contains predominantly light industrial land uses on both sides of Mormon Slough, with some commercial uses set further back. Along Sierra Nevada Street and near the eastern terminus of the project site are residential areas contain mainly single-family residences. As discussed in Section 3.1, Aesthetics, the Mormon Slough channel area is occupied by tents and temporary structures and improvements used by the unhoused population of the downtown area.

The project site is within the Stockton city limits. The Stockton General Plan 2040 designates most lands adjacent to the project site as Industrial and Commercial. Parcels along Sierra Nevada Street and near the eastern terminus of the project site are designated Medium Density Residential. The City of Stockton has designated zones on adjacent properties in accordance with its Zoning Ordinance. Zoning includes IG – Industrial, General; IL – Industrial, Limited; RM – Residential, Medium Density; and CG – Commercial, General.

Environmental Impacts and Mitigation Measures

a) Division of Established Community.

The project is the replacement of an underground sanitary sewer line. As the project would be under ground, it would not divide any established community. The project would have no impact on this issue.

b) Conflicts with Land Use Plans, Policies, and Regulations.

As the project is the replacement of an existing sanitary sewer line, it would not conflict with existing Stockton General Plan land use designations or zoning. It also would not be expected to conflict with Stockton plans, policies, and ordinances adopted for the purpose of avoiding or mitigating an environmental effect. The only potential conflict that may occur would be with Stockton General Plan Policy LU-5.2, which seeks to protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, agricultural lands, parks, and other cultural/historic resources from encroachment or destruction by incompatible development. Potential impacts related to this policy are analyzed in Section 3.4, Biological Resources. The conclusion reached was that the project would have no significant impact on Mormon Slough with implementation of mitigation measures. Project impacts related to conflicts with land use plans, policies, and regulations would be less than significant.

3.12 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

Mineral resources within San Joaquin County are primarily sand, gravel, and other construction material deposits in the alluvial portion of the valley floor. Sand and gravel deposits have been identified along the Stanislaus River in San Joaquin and Stanislaus Counties from Ripon to the Stanislaus/Tuolumne County line (DMG 1977). Portland cement concrete aggregate deposits also have been identified within San Joaquin County; however, none are located on the project site (DMG 1988).

Oil and natural gas deposits have been identified throughout the Central Valley. Most of the deposits in the Stockton area are of natural gas. The project site does not contain oil or natural gas fields. The nearest such field is the Stockton natural gas field, which has been abandoned. The nearest active field is the French Camp natural gas field south of Stockton (DOGGR 2001).

Environmental Impacts and Mitigation Measures

a, b) Availability of Mineral Resources.

As described above, there are no identified mineral resources areas on or near the project site. There are no active mining operations on or near the project site. Therefore, the project would not affect the availability of, or access to, any known or locally designated mineral resources. The project would have no impact on mineral resources.

3.13 NOISE

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

NARRATIVE DISCUSSION

Environmental Setting

The main source of noise in the project vicinity is motor vehicle traffic on local streets, mainly truck traffic associated with adjacent commercial and industrial land uses along Wilson way. Some of these land uses also generate noise during their hours of operation. The main concern regarding noise generators are their impacts on noise-sensitive land uses. Noise-sensitive land uses are defined in Stockton Municipal Code Section 16.60.040 as residences, childcare and educational facilities, libraries and museums, lodging, and medical services. As noted, there are residences along Sierra Nevada Street and near the eastern terminus of the project site. No other noise-sensitive land uses are in the project vicinity.

Stockton Municipal Code Section 16.60.040 establishes the City's standards concerning acceptable noise levels for both noise-sensitive land uses and for noise-generating land uses and transportation-related sources. Noise standards for land uses are presented in Table 3-3 below. Standards are presented in decibels (dB) per the hourly equivalent sound level (L_{eq}) and the maximum sound level. The L_{eq} corresponds to a steady-state 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.

TABLE 3-3
CITY OF STOCKTON LAND USE NOISE STANDARDS

	Outdoor Activity Areas	
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.

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. Construction equipment is another potential source. Caltrans has prescribed a methodology for evaluating groundborne vibration impacts from construction related to potential damage to structures, based on transient sources (e.g., blasting, drop balls) or continuous/frequent intermittent sources such as impact and vibratory pile drivers, vibratory compaction equipment (Caltrans 2013). Measurements of groundborne vibrations are presented in peak particle velocity, with the unit of measure being inches per second. Table 3-4 presents thresholds for impacts related to groundborne vibration, based on the Caltrans methodology.

TABLE 3-4
GROUNDBORNE VIBRATION THRESHOLDS

Guidelines for:	Maximum Peak Particle Velocity (in/sec)	
	Transient Sources	**Continuous/Frequent Intermittent Sources**
Structure and Condition		
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Human Response		
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.1
Severe	2.0	0.4

Source: Caltrans 2013.

Environmental Impacts and Mitigation Measures

a) Generation of Noise Exceeding Local Standards.

Temporary noise impacts would occur with project construction, mainly from construction equipment and from worker vehicle traffic. Most land uses adjacent to the project site are not sensitive to noise. However, as noted, residential areas are located along Sierra Nevada Street and near the eastern terminus of the project site. Construction activities near residences could generate noise at levels that exceed City noise standards for these land uses. Table 3-5 shows noise levels that could be generated by construction equipment. Construction activities would be temporary and would cease once construction work is completed on the segments near the residential areas. Nevertheless, construction noise is a potentially significant impact. Mitigation described below would limit construction hours and require the use of mufflers, thereby reducing construction noise impacts to a level that would be less than significant.

After construction is completed, the project would not generate noise, as the replacement sanitary sewer line would be underground. No additional facilities that could generate noise, such as pumps, would be installed. Project operation would have no impact on ambient noise in the project vicinity.

TABLE 3-5
CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dB at 50 feet
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

Source: FHWA 2006.

Level of Significance: Potentially significant

Mitigation Measures:

NOISE-1: The following measures shall be implemented to minimize noise impacts at sensitive receptors (i.e., residences) during construction:

- Construction activities shall be limited to the hours from 7:00 a.m. to 6:00 p.m. on all working days. Construction work shall not occur on Sundays and federal holidays.
- Use newer equipment with improved muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators intact and operational. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.).
- Turn off idling equipment when not in use for more than five minutes, in accordance with State regulations.
- Plan noisier operations during times of least sensitivity to receptors.
- Provide frequent activity update of all construction activities to affected residences.

Significance After Mitigation: Less than significant

b) Exposure to Groundborne Vibrations.

The project may generate groundborne vibrations from construction equipment use. As noted, land uses sensitive to noise are located near the project site. These land uses would also be sensitive to groundborne vibrations. Groundborne vibrations from project construction would cease once work is completed; nevertheless, groundborne vibrations could significantly affect sensitive land uses. Vibration levels from various types of construction equipment are shown in Table 3-6.

TABLE 3-6
VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	**Peak Particle Velocity at 25 feet (in/sec)**
Large bulldozer	0.089
Caisson drilling	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

Source: City of Stockton 2017b.

Based on Caltrans standards provided in Table 3-4 above, the construction equipment likely to have an impact would generate groundborne vibrations that are less than the Caltrans thresholds for structural damage or human perception. After construction work is completed, no groundborne vibrations would be generated by the project. Project impacts related to groundborne vibration would be less than significant.

c) Public Airport and Private Airstrip Noise.

As noted in Section 3.9, Hazards and Hazardous Materials, the nearest public airport is Stockton Metropolitan Airport, approximately three miles to the south. The project site is outside the noise exposure contours delineated in the Airport Land Use Compatibility Plan for the airport (Coffman Associates 2016). There are no private airstrips in the project vicinity. The project would not lead to the placement of residents or employees who could potentially be exposed to noise from any source. The project would have no impact related to airport or airstrip noise.

3.14 POPULATION AND HOUSING

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

NARRATIVE DISCUSSION

Environmental Setting

The 2020 U.S. Census indicates that the population of Stockton is 312,682, an increase of approximately 7.2% from its 2010 U.S. Census population of 291,707. As of the 2020 U.S. Census, Stockton had an estimated 104,720 housing units (U.S. Census Bureau 2020). Based on estimates from the California Department of Finance, single-family detached units (typical houses) accounted for approximately 64.5% of total housing units in Stockton (California Department of Finance 2021).

Environmental Impacts and Mitigation Measures

a) Unplanned Population Growth.

The project would not directly lead to the development of additional housing or businesses that may encourage population growth beyond that anticipated in the Stockton General Plan. The project vicinity is already substantially developed, and any future development would occur in accordance with the Stockton General Plan, as set forth in Section 3.11, Land Use. The project would have no impact related to unplanned population growth.

b) Displacement of Housing or People.

The project would be constructed within existing rights-of-way and along a stream. No existing residential units would be removed, and no residents would be displaced. The project would have no impact related to displacement.

3.15 PUBLIC SERVICES

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of, or the 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
i) Fire protection?				✓
ii) Police protection?				✓
iii) Schools?				✓
iv) Parks?				✓
v) Other public facilities?				✓

NARRATIVE DISCUSSION

Environmental Setting

Fire protection services are provided to the project site and vicinity by the Stockton Fire Department, and police protection services are provided by the Stockton Police Department. Parks within the City of Stockton are managed by the City's Community Services Department.

The project site is within the boundaries of the Stockton Unified School District. The Stockton-San Joaquin County Public Library system provides library services to the City. The Superior Court of California, County of San Joaquin, has a courthouse in Stockton on 180 East Weber Avenue.

Environmental Impacts and Mitigation Measures

a-i) Fire Protection Services.

The project is the replacement of a sanitary sewer line. As noted in Section 3.14, Population and Housing, the project would not construct residences or other development that would encourage population growth in the area. 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.

a-ii) Police Protection Services.

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.

a-iii) 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.

a-iv) Parks.

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

a-v) Other Public Facilities.

The project would not create additional demand for 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.

3.16 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?				✓
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?				✓

NARRATIVE DISCUSSION

Environmental Setting

As noted in Section 3.15, Public Services, the City of Stockton provides park and recreational services within its City limits, managed by its Community Services Department. The City owns and operates 66 parks, along with accessible open space, special purpose facilities, and trails. The nearest City park is Liberty Square, at the corner of Jefferson and Grant Streets just north of the western terminus of the project site.

Environmental Impacts and Mitigation Measures

a, b) Recreational Facilities.

The project is the replacement of a sanitary sewer line. As noted in Section 3.14, Population and Housing, the project would not construct residences or other development that would encourage population growth in the area. Because of this, it would not create additional demand for recreational facilities, nor would it increase the use of existing facilities. No new or expanded facilities that could have environmental impacts would be required. The project would have no impact related to recreation.

3.17 TRANSPORTATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?				✓
b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?				✓
c) Substantially increase hazards to a geometric design feature (e g., sharp curves or dangerous intersections) or incompatible uses (e g, farm equipment)?				✓
d) Result in inadequate emergency access?		✓		

NARRATIVE DISCUSSION

Environmental Setting

The project site crosses or runs parallel to City of Stockton streets. In its western portion, the project site crosses Grant Street and Aurora Street. The central portion of the site crosses beneath Airport Way and Wilson Way. The eastern portion parallels the segment of Jefferson Street east of Bieghle Alley. Airport Way and Wilson Way are designated by the Stockton General Plan as arterials; all other named streets are local streets serving adjacent residences and businesses.

The San Joaquin Regional Transit District is the primary provider of public transportation service in the Stockton metropolitan area, offering fixed-route and flexible fixed-route services in the Stockton metropolitan area. It also provides curb-to-curb paratransit ("dial-a-ride") bus service for passengers who, due to their disability or age, are unable to access fixed route services. In the project vicinity, bus routes are on Stanislaus Street, Airport Way, and Wilson Way. There are no designated bike routes in the project

vicinity. Sidewalks with varying widths and conditions have been installed in the residential areas and along Wilson Way.

Traffic conditions are frequently analyzed based on Level of Service (LOS). LOS measures the quality of traffic movement on roadways and through intersections. LOS is represented by letter designations from A to F, with A representing the best movement conditions and F representing the worst. However, the State of California has recently added Section 15064.3 to the CEQA Guidelines, which is meant to incorporate SB 743 into CEQA analysis. SB 743 was enacted in 2013 with the intent to balance congestion management needs and the mitigation of the environmental impacts of traffic with statewide GHG emission reduction goals. To advance this intent, Section 15064.3(b) states that VMT is the preferred method for evaluating transportation impacts. The VMT metric measures the total miles traveled by vehicles associated with a project. VMT accounts for the total environmental impact of transportation associated with a project, including use of non-vehicle travel modes. As noted in Section 3.6, Energy, estimated countywide daily VMT was 17,868,785 miles in 2015.

Environmental Impacts and Mitigation Measures

a) Conflicts with Transportation Programs and Plans.

The project is the replacement of a sanitary sewer line. As such, it would not involve any new long-term traffic generation, other than occasional trips by vehicles for maintenance and repair work. As noted in Section 3.14, Population and Housing, the project would not lead to development that would increase population. Therefore, the project would not indirectly increase traffic or generate additional demand on public transit or on facilities such as bikeways. The project would not conflict with any transportation programs or plans; therefore, the project would have no impact on this issue.

b) Conflict with CEQA Guidelines Section 15064.3(b).

As noted in a) above, the project would not generate any long-term traffic. Because of this, the project would not generate any VMT; therefore, it would not conflict with CEQA Guidelines Section 15064.3(b). The project would have no impact on this issue.

c) Traffic Hazards.

While the project would likely require some work within streets, the project would not alter streets in a manner considered hazardous to users. After construction work is completed, streets would be restored to their existing conditions. As noted in a) above, no additional traffic would be generated, and traffic composition on the affected streets would not changes. The project would have no impact related to traffic hazards.

d) Emergency Access.

As discussed in Section 3.9, Hazards and Hazardous Materials, access for emergency vehicles to adjacent land uses would be maintained after project construction work is completed. Project construction may temporarily increase the response time for such vehicles on Sierra Nevada Street, plus access to adjacent land uses may be restricted.

Implementation of Mitigation Measure HAZ-3 would reduce impacts related to emergency access during construction to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures: Implementation of Mitigation Measure HAZ-3.

Significance After Mitigation: Less than significant

3.18 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

Information for this section is provided by a Cultural Resources Inventory and Evaluation Report prepared by Solano Archaeological Services, available in Appendix C. Section 3.5, Cultural Resources, describes the preparation of the report.

Environmental Setting

The project site is generally considered to be in Northern Valley Yokuts territory. The Northern Valley Yokuts occupied the land on either side of the San Joaquin River from the Delta to south of Mendota. The Diablo range probably marked the western boundary of Yokuts territory; the eastern boundary would have lain along the Sierra Nevada foothills. The Northern Valley Yokuts were organized into at least 11 small political units or tribes. Each tribe had a population of approximately 300 people, most of who lived within one principal settlement. Within the villages, structures included sweathouses, ceremonial chambers, and oval single-family dwellings made of tule. Northern Valley Yokuts material culture included a wide range of implements, including acorn mortars

and pestles; snares, bows and spears used in hunting; tule boats; and a wide variety of basketry.

Early in the historic period, the Yokuts were severely impacted by the effects of Euro-American settlement. The Yokuts were particularly decimated by disease and warfare; as a result, they were generally not well documented in the ethnographic record. Many Yokuts were lured or captured by missionaries and taken to Mission San Jose or Mission Santa Clara. A probable malaria epidemic in 1833 decimated the indigenous population, killing thousands. The influx of Europeans during the Gold Rush era further reduced the population because of disease and violent encounters with the miners Presently, the Nototomne/North Valley Yokut Tribe, Inc., represents the Northern Valley Yokuts in the Stockton region.

In 2014, the California Legislature enacted AB 52. AB 52 modifies CEQA procedures regarding consultation with Native American tribes on cultural resource issues. AB 52 established a category called "tribal cultural resources," which not only includes physical resources but also site features, places, cultural landscapes, and sacred places and objects of value to a tribe, and which are on or eligible for a State or local historic register. AB 52 establishes notification requirements and consultation procedures between a CEQA lead agency and a tribe when a tribal cultural resource is involved. Matters which may be subjects of AB 52 consultation include the type of CEQA environmental review necessary, the significance of tribal cultural resources, and project alternatives or appropriate measures for preservation or mitigation of the tribal cultural resource that the tribe may recommend to the lead agency.

The consultation process ends when either (1) the resource in question is not considered significant, (2) the parties agree to mitigate or avoid a significant effect on a tribal cultural resource, or (3) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. Regardless of the outcome, a lead agency is still obligated under CEQA to mitigate for any significant environmental effects, as explicitly noted in AB 52

Environmental Impacts and Mitigation Measures

a, b) Tribal Cultural Resources.

As part of the preparation of its report, Solano Archaeological Services requested the Native American Heritage Commission conduct a search of its Sacred Lands File for any record of the project site. The results of the search were negative. The Native American Heritage Commission provided a list of regional Native American community contacts consisting of 11 representatives of six tribes. Solano Archaeological Services made letter and telephone contact with all 11 representatives. One representative, Katherine Perez of the North Valley Yokuts Tribe, responded by expressing general concerns regarding the overall sensitivity of the project site and the potential for unanticipated discoveries since Mormon Slough is a natural watercourse. No concerns about specific tribal cultural resources on the project site were expressed. To date, the City has not received any requests for AB 52 consultation from a tribe.

As noted in Section 3.5, Cultural Resources, a records search found no record of any archaeological resources on the project site, and a field survey found no prehistoric-era archaeological sites, features, or artifacts within or adjacent to the project site. However, as indicated in the comment from Katherine Perez, there is a potential for project construction to encounter currently unknown tribal cultural resources. As described in Section 3.5, the City has procedures to be followed should any human remains be uncovered, with special requirements for burials determined to be Native American. Implementation of Mitigation Measure CULT-1, described in Section 3.5, sets forth procedures for the treatment and disposition of uncovered resources. In addition, mitigation described below that is specific to tribal cultural resources shall be implemented. With implementation of these mitigation measures, impacts on tribal cultural resources would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

TCR-1: If tribal cultural resources, including human remains and associated funerary objects, are encountered, the City shall be immediately notified of the find, and the City shall notify the appropriate tribal representatives. The qualified archaeologist and tribal representatives shall examine the materials and determine their significance as tribal cultural resources and shall recommend mitigation measures needed to reduce potential cultural resource effects to a level that is less than significant in a written report to the City, with a copy to the tribal representatives. The City will be responsible for implementing the report recommendations. Avoidance is the preferred means of disposition of tribal cultural resources.

Significance After Mitigation: Less than significant

3.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?		✓		
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				✓
c) Result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition				✓

to the provider's existing commitments?				
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				✓
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

NARRATIVE DISCUSSION

Environmental Setting

The City of Stockton provides wastewater and storm drainage services and facilities to the project vicinity. Water service in the area is provided by California Water Service (Cal Water), a private company. Solid waste collection service to residences and businesses is provided by Waste Management. Energy services, including electricity and natural gas, are provided by Pacific Gas and Electric Company. Telephone service is provided by AT&T, while cellular telephone service is provided by several companies.

Environmental Impacts and Mitigation Measures

a) Relocation or Construction of Utility Facilities.

The project is the replacement of an existing sanitary sewer line. No additional sewer or other utility lines would be installed. No relocation of existing lines is anticipated. However, project construction would involve excavation within existing public right-of-way, portions of which contain existing underground water, storm drainage, energy, and communication lines. Excavation may involve the potential for damage to existing underground utilities.

Concerns about other underground utility lines are typically addressed by locating these facilities on plans during project engineering and by consulting with Underground Service Alert (USA), a nationwide utility location service, prior to construction. Mitigation presented below would ensure that project design and construction take into consideration existing underground utility facilities and avoid damage to these facilities. Planned improvements would not likely result in conflicts with any existing overhead electric, telephone, cable, or other utilities, although these facilities would also be identified through project engineering and consulting with USA. Implementation of mitigation measures would reduce potential impacts on other utility lines to a level that would be less than significant.

Level of Significance: Potentially significant

Mitigation Measures:

UTIL-1: Existing utility lines and facilities shall be identified on project plans. Project design shall enable construction of the planned improvements to

occur without damage to existing utilities. Should utility conflicts be unavoidable, project plans and specifications shall provide for relocation or reconstruction of existing utilities as required.

UTIL-2: The project contractor shall consult with Underground Service Alert (USA) prior to construction to verify the location of any underground utilities in the construction area. Should USA identify an underground utility facility not accounted for in the project plans, the City shall contact the company or agency responsible for the facility in question to verify its existence. If the existence of this facility is confirmed, then no construction shall proceed in the vicinity of this facility until project plans and specifications are modified such that this facility would be avoided, relocated, or reconstructed when construction work resumes.

Significance After Mitigation: Less than significant

b) Water Supplies.

The project would not place demands on the water supplies of Cal Water; therefore, no new supplies would need to be obtained. The project would have no impact on water supplies.

c) Wastewater Treatment Capacity.

The project would lead to more efficient collection of wastewater in the area, with less leakage. However, the project by itself would not generate wastewater; therefore, it would not create a demand for additional wastewater treatment capacity. As noted in this IS/MND, the project is not expected to encourage development such that additional wastewater capacity would be needed. The project would have no impact on wastewater treatment capacity.

d, e) Solid Waste Services.

The project would generate a moderate amount of construction debris, including broken pavement and waste soil in the paved portions of the project site. Waste material would likely be recycled or used for waste disposal cover material. The project would not generate a long-term demand for solid waste collection or disposal. The project would not place substantial demands on the capacity of landfills where the City's solid waste is disposed. The project would have no impact on solid waste services or regulations pertaining to solid waste.

3.20 WILDFIRE

If located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones, would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan				✓

or emergency evacuation plan?				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			✓	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			✓	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				✓

NARRATIVE DISCUSSION

Environmental Setting

Wildland fires are an annual hazard in San Joaquin County. Wildland fires burn natural vegetation on undeveloped lands and include rangeland, brush, and grass fires. Long, hot, and dry summers with temperatures often exceeding 100°F add to the County's fire hazard. Human activities are the major causes of wildland fires, while lightning causes the remaining wildland fires. High hazard areas for wildland fires are the grass-covered areas in the east and the southwest foothills of the County (San Joaquin County 2016).

The California Department of Forestry and Fire Protection (Cal Fire) has a Fire and Resource Assessment Program that identifies fire threat based on a combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). These two factors are combined in determining the following Fire Hazard Severity Zones: Moderate, High, Very High, Extreme. These zones apply to areas designated as State Responsibility Areas – areas in which the State has primary firefighting responsibility. The project site is not within a State Responsibility Area and therefore has not been placed in a Fire Hazard Severity Zone. The area surrounding the project site is likewise not in any designated fire hazard zone (Cal Fire 2007a, 2007b).

Environmental Impacts and Mitigation Measures

a) Emergency Response Plans and Emergency Evacuation Plans.

The project site is not part of a State Responsibility Area, and Cal Fire maps indicate the site is not designated within a Very High Fire Hazard Severity Zone or a zone of higher severity. The project is in a developed urban area with no significant open spaces. The project would have no impact related to wildfire emergency response plans or emergency evacuation plans.

b) Exposure of Project Occupants to Wildfire Hazards.

The project site is the replacement of a sanitary sewer line. The project would not lead to the placement of occupants who could be potentially exposed to pollutants from a wildfire. Cal Fire maps indicate that the project site is in a low-risk wildfire area. As noted in Section 3.9, Hazards and Hazardous Materials, there is open space area along Mormon Slough that could be prone to wildfire during project construction activities. Construction plans and specifications would include provisions to reduce fire hazards. With these provisions, project impacts related to exposure of project occupants to wildfire hazards would be less than significant.

c) Installation and Maintenance of Infrastructure.

As noted, the project site is in an urban area with no heightened risk of wildfire. The replacement of the existing sanitary sewer line would not exacerbate the wildfire risk on the project site, other than during construction activities as noted in b) above. Project related to infrastructural exacerbation of wildfire hazards would be less than significant.

d) Risks from Runoff, Post-Fire Slope Instability, or Drainage Changes.

The project site is in a topographically flat area in the San Joaquin Valley. As such, it is not expected that people or structures would be exposed to significant risks from changes resulting from fires in steeper areas farther upstream, including downslope or downstream flooding or landslides. The project would have no impact related to risks from runoff, post-fire slope instability, or drainage changes.

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

a) Findings on Biological and Cultural Resources.

The potential biological resource and cultural resource impacts of the revised project were described in Sections 3.4 and 3.5 of this IS/MND. Potentially significant environmental effects on biological and cultural resources were identified, but implementation of mitigation measures described in Sections 3.4 and 3.5 would reduce these effects to a level that would be less than significant.

b) Findings on Cumulatively Considerable Impacts.

A cumulative impact is an environmental impact that may result from the combination of two or more environmental impacts associated with the proposed project with each other, or the combination of one or more project impacts with related environmental impacts caused by other projects.

In general, the project would have no impact on environmental issues, or would have impacts that are less than significant. For project-specific effects identified as potentially significant, mitigation measures would reduce these effects to a level that would be less than significant. The project is an improvement to an existing sewer pipeline; as such, it is not expected to have cumulative effects. The project would not make a considerable contribution to potential cumulative impacts.

c) Findings on Adverse Effects on Human Beings.

Potential adverse project effects on human beings were discussed in Section 3.3, Air Quality; Section 3.7, Geology and Soils (seismic hazards); Section 3.9, Hazards and Hazardous Materials; Section 3.10, Hydrology and Water Quality (flooding); Section 3.17, Transportation (traffic hazards); and Section 3.20, Wildfire. The project would have no impact or a less-than-significant impact on most of these issues. Potential adverse effects that were identified in those sections would be reduced to levels considered less than significant through compliance with applicable laws, regulations, and City ordinances and standards, along with mitigation measures where necessary.

4.0 REFERENCES

4.1 DOCUMENT PREPARERS

This IS/MND was prepared by BaseCamp Environmental, Inc. for use by and under the supervision of the City of Stockton Public Works Department. The following persons were involved in preparation of the IS/MND:

City of Stockton Public Works Department

Seng Lo, Associate Engineer

KSN, Inc.

Bill Worrall, P.E., Associate Engineer

BaseCamp Environmental, Inc.

Charlie Simpson, Principal
Terry Farmer, AICP, Senior Environmental Planner
Krista Simpson, Associate Environmental Planner

BaseCamp Subcontractors

Jason Coleman, Principal, Solano Archaeological Services
Diane S. Moore, Moore Biological Consultants

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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 Analysis Used: Identify and state where they are available for review.

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

    c) Mitigation Measures: For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation 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) This 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
RCEM RESULTS

Road Construction Emissions Model — Version 9.0.0

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

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.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Mormon Slough Sewer	
Construction Start Year	2023	Enter a Year between 2014 and 2040 (inclusive)
Project Type For 4: Other Linear Project Type, please provide project specific off-road equipment population and vehicle trip data	4	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	3.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.49	miles
Total Project Area	2.69	acres
Maximum Area Disturbed/Day	0.04	acres
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd3) (assume 20 if unknown)	Import Volume (yd3/day)	Export Volume (yd3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade	20.00	5.00	10.00
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade	20.00	1.00	1.00
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that require modification when 'Other Project Type' is selected.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing		0.30		1/1/2023
Grading/Excavation		1.20		1/11/2023
Drainage/Utilities/Sub-Grade		1.05		2/17/2023
Paving		0.45		3/21/2023
Totals (Months)		3		

Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade	5.00			1	5.00
Miles/round trip: Paving				0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36

Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.04	0.00	0.00	0.00	18.90	0.00	0.00	19.79
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.23
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.23

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions	User Override of	Program Estimate of	User Override of Truck	Default Values	Calculated
User Input	Miles/Round Trip	Miles/Round Trip	Round Trips/Day	Round Trips/Day	Daily VMT
Miles/round trip: Grubbing/Land Clearing				0	0.00
Miles/round trip: Grading/Excavation				0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade	5.00			1	5.00
Miles/round trip: Paving				0	0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.04	0.00	0.00	0.00	18.90	0.00	0.00	19.79
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.23
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.23

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions	User Override of Worker Commute Default Values	Default Values		
User Input				
Miles/ one-way trip	5		Calculated Daily Trips	Calculated Daily VMT
One-way trips/day	1			
No. of employees: Grubbing/Land Clearing	3		3	15.00
No. of employees: Grading/Excavation	3		3	15.00
No. of employees: Drainage/Utilities/Sub-Grade	5		5	25.00
No. of employees: Paving	3		3	15.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grading/Excavation (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Draining/Utilities/Sub-Grade (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Paving (grams/mile)	0.02	0.91	0.07	0.05	0.02	0.00	317.66	0.00	0.01	319.68
Grubbing/Land Clearing (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Grading/Excavation (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Draining/Utilities/Sub-Grade (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Paving (grams/trip)	1.04	2.75	0.29	0.00	0.00	0.00	68.26	0.07	0.03	79.50
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.01	0.05	0.00	0.00	0.00	0.00	10.96	0.00	0.00	11.10
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.04
Pounds per day - Grading/Excavation	0.01	0.05	0.00	0.00	0.00	0.00	10.96	0.00	0.00	11.10
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.15
Pounds per day - Drainage/Utilities/Sub-Grade	0.01	0.08	0.01	0.00	0.00	0.00	18.26	0.00	0.00	18.50
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.21
Pounds per day - Paving	0.01	0.05	0.00	0.00	0.00	0.00	10.96	0.00	0.00	11.10
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.45

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
User Input								
Grubbing/Land Clearing - Exhaust	1		1.00			5.00		5.00
Grading/Excavation - Exhaust								0.00
Drainage/Utilities/Subgrade								0.00
Paving								0.00

Emission Rates	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Grubbing/Land Clearing (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grading/Excavation (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Paving (grams/mile)	0.03	0.40	2.98	0.11	0.05	0.02	1,714.99	0.00	0.27	1,795.36
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.04	0.00	0.00	0.00	18.90	0.00	0.00	19.79
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.07
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.07

Note: Fugitive dust default values can be overridden in cells D183 through D185.

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			0.40	0.00	0.08	0.00
Fugitive Dust - Grading/Excavation			0.40	0.01	0.08	0.00
Fugitive Dust - Drainage/Utilities/Subgrade			0.40	0.00	0.08	0.00

Values in cells D195 through D228, D246 through D279, D297 through D330, and D348 through D381 are required when 'Other Project Type' is selected.

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Off-Highway Trucks	0.50	3.29	3.57	0.13	0.12	0.01	1,279.89	0.41
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Scrapers	0.79	6.14	8.28	0.32	0.30	0.02	1,470.13	0.48
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment — If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grubbing/Land Clearing	pounds per day	1.29	9.43	11.85	0.45	0.42	0.03	2,750.02	0.89
Grubbing/Land Clearing	tons per phase	0.00	0.03	0.04	0.00	0.00	0.00	9.08	0.00

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Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Tractors/Loaders/Backhoes	0.15	2.23	1.54	0.08	0.07	0.00	301.58	0.10
1.00			Model Default Tier	Trenchers	0.35	2.59	3.23	0.22	0.21	0.00	327.20	0.11
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Grading/Excavation	pounds per day	0.50	4.82	4.77	0.30	0.28	0.01	628.78	0.20
Grading/Excavation	tons per phase	0.01	0.06	0.06	0.00	0.00	0.00	8.30	0.00

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Bore/Drill Rigs	0.22	2.03	2.04	0.07	0.06	0.01	915.40	0.30
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Other Construction Equipment	0.35	4.00	3.44	0.18	0.16	0.01	598.26	0.19
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4
Drainage/Utilities/Sub-Grade	pounds per day	0.56	6.04	5.48	0.25	0.23	0.02	1,513.67	0.49
Drainage/Utilities/Sub-Grade	tons per phase	0.01	0.07	0.06	0.00	0.00	0.00	17.48	0.01

Paving: Override of Default Number of Vehicles	Default Number of Vehicles (*Program-estimate*)	Mitigation Option: Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Pavers	0.19	2.88	1.88	0.09	0.08	0.00	455.22	0.15
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00			Model Default Tier	Rubber Tired Dozers	0.68	3.11	7.13	0.32	0.30	0.01	827.00	0.27
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Signal Boards	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment — If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	N/A		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving		pounds per day	0.88	5.99	9.01	0.41	0.38	0.01	1,282.22	0.41
Paving		tons per phase	0.00	0.03	0.04	0.00	0.00	0.00	6.35	0.00
Total Emissions all Phases (tons per construction period) =>			0.02	0.19	0.21	0.01	0.01	0.00	41.20	0.01

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8

Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

APPENDIX B
BIOLOGICAL RESOURCES REPORT

MOORE BIOLOGICAL CONSULTANTS

August 5, 2022

Mr. Charlie Simpson
BaseCamp Environmental
802 West Lodi Avenue
Lodi, CA 95240

Subject: "MORMON SLOUGH SEWER REHABILITATION PROJECT", STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA: BIOLOGICAL ASSESSMENT

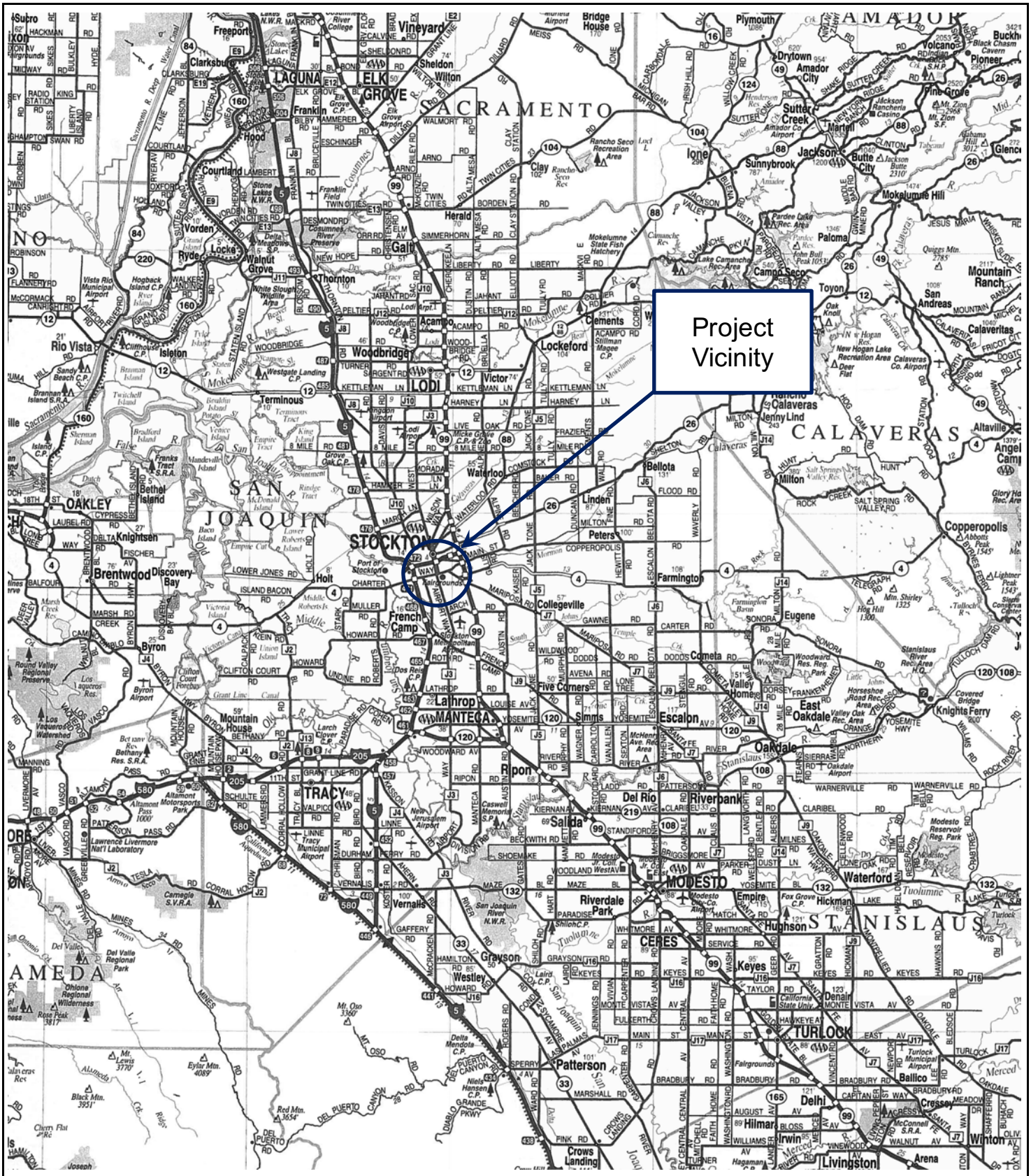
Dear Charlie:

Thank you for asking Moore Biological Consultants to assist with the Mormon Slough Sewer Rehabilitation Project in Stockton, San Joaquin County, 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 City of Stockton proposed to rehabilitate approximately 2,600 feet of existing 24-inch diameter, reinforced concrete sanitary sewer pipeline along the Mormon Slough channel upstream and downstream of Wilson Way, and in adjacent developed lands (see Site Plan in Attachment A). Rehabilitation will consist of replacement of the existing 24-inch pipeline with a 36-inch pipeline.

10330 Twin Cities Road, Suite 30 • Galt, CA 95632
(209) 745–1159 • Fax (209) 745-7513
e-mail: moorebio@softcom.net



Source: California State Automobile Association

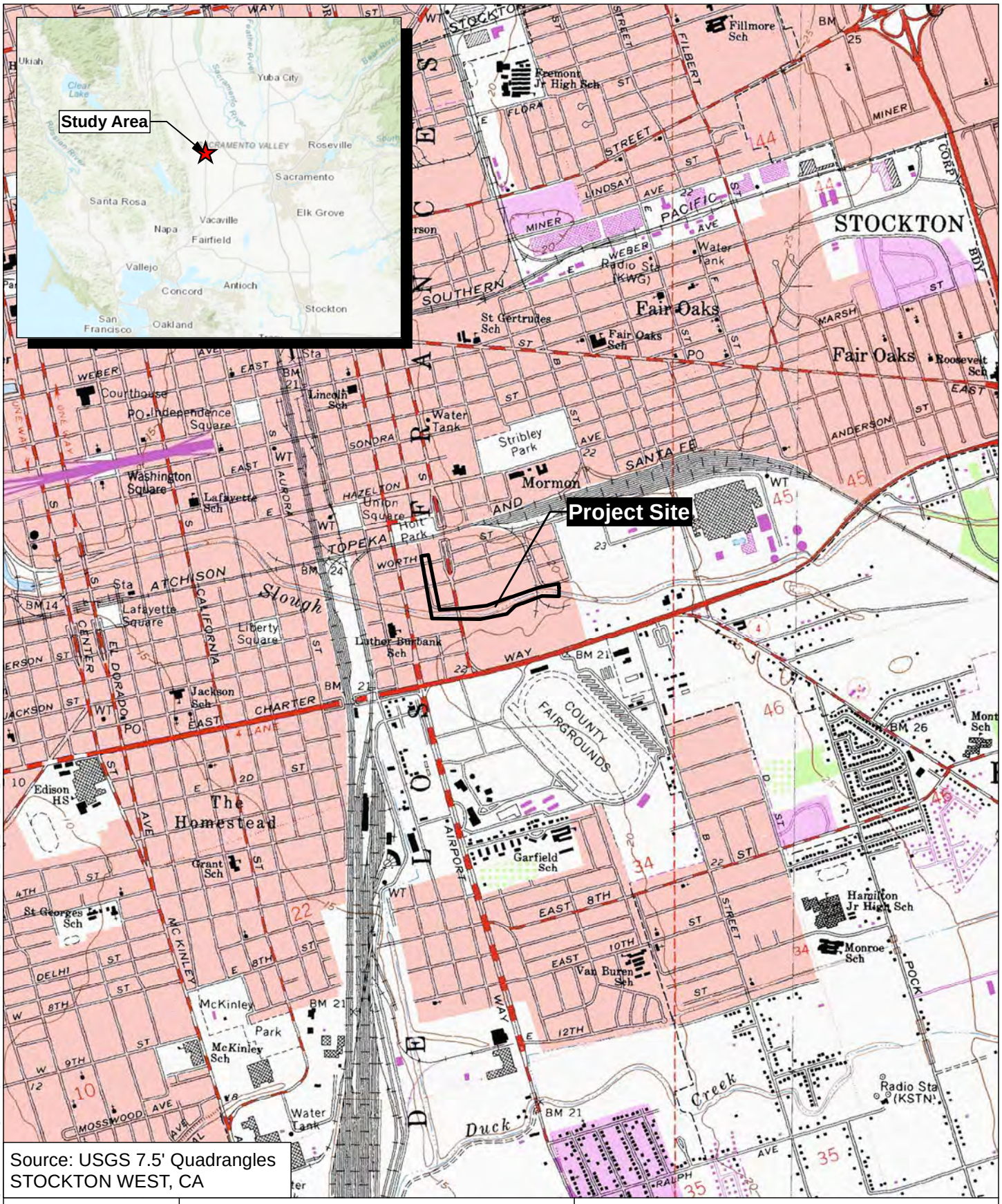
Moore Biological Consultants

N
W E
S

0 9 18 Miles

FIGURE 1

PROJECT VICINITY



Source: USGS 7.5' Quadrangles
STOCKTON WEST, CA

Figure 2

Moore Biological Consultants

0 1,000 2,000
Feet

N
W E
S

Map Date: 07/21/2022

USGS

Mormon Slough Sanitary Sewer Rehabilitation Project

City of Stockton, San Joaquin County, CA

Construction activity will primarily involve conventional open cut excavation, shoring where needed, removal of the existing pipeline in certain sections of the project, and placement of pipeline bedding, the pipeline and backfill material. Bore & jack technology will be utilized for approximately 100 lineal feet of pipeline under the Wilson Way bridge. Following construction, the ground surface along the alignment will be restored to existing conditions and vegetation and wildlife habitats in the study area will be comparable to those prior to construction.

Methods

Prior to the field survey, we conducted a search of California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB, 2021); an updated search was undertaken in July 2022 (CNDDB, 2022). The CNDDB search included the USGS 7.5-minute Stockton West and Stockton East topographic quadrangles, encompassing approximately 120+/- square miles surrounding the study area (Attachment B). The United States Fish and Wildlife Service (USFWS*)* IPaC Trust Resource Report of Federally Threatened and Endangered species that may occur in or be affected by projects in the project vicinity was also reviewed (Attachment B). This information was used to identify special-status wildlife and plant species that have been previously documented in the vicinity or have the potential to occur based on suitable habitat and geographical distribution. Additionally, the CNDDB depicts the locations of sensitive habitats. The USFWS on-line-maps of designated critical habitat in the area were also downloaded.

A field survey was conducted on April 9, 2021. The survey area included the sewer alignment as well as adjacent areas that may be subject to construction disturbance, primarily within the Mormon Slough corridor. The survey consisted of walking throughout the study area making observations of habitat conditions and noting surrounding land uses, habitat types, and plant and wildlife species. The fieldwork included an assessment of potentially jurisdictional Waters of the

U.S. and wetlands as defined by the U.S. Army Corps of Engineers (ACOE, 1987; 2008) and a search for special-status species and suitable habitat for special-status species (e.g., blue elderberry shrubs, vernal pools). Trees in and near the study area were assessed for the potential use by nesting raptors, especially Swainson's hawk (*Buteo swainsoni*). The grasslands in the study area and adjacent areas visible from the study area were searched for burrowing owls (*Athene cunicularia*) or ground squirrel burrows with evidence of past occupancy.

Under subcontract to Moore Biological, Salix Consulting, Inc. conducted an Aquatic Resources Delineation of the study area.

Results

GENERAL SETTING: The study area is located in Stockton, in San Joaquin, County California (Figure 1). The study area is in an Unnumbered Section within Township 1 North and Range 6 East of the USGS 7.5-minute Stockton West topographic quadrangle (Figure 2). The study area is at an elevation of approximately 20 feet above mean sea level.

The study area is primarily a swath of land within the Mormon Slough channel, extending generally east to west through urbanized Stockton (Figure 3 and photographs in Attachment C). The north west tip of the study area originates on East Worth Street and extends south, through an automotive storage yard, and in to the Mormon Slough channel. The study area then extends to the east, under the Wilson Way bridge for an additional 1,450 feet from the approximate center of the bridge.

Mormon Slough flows east to west through the east part of the study area in a relatively narrow well defined low-flow channel (see photographs in Attachment C). The inlet to a large box culvert is located approximately 320 feet east of the Wilson Way bridge. West of the culvert inlet, Mormon Slough flows are conveyed

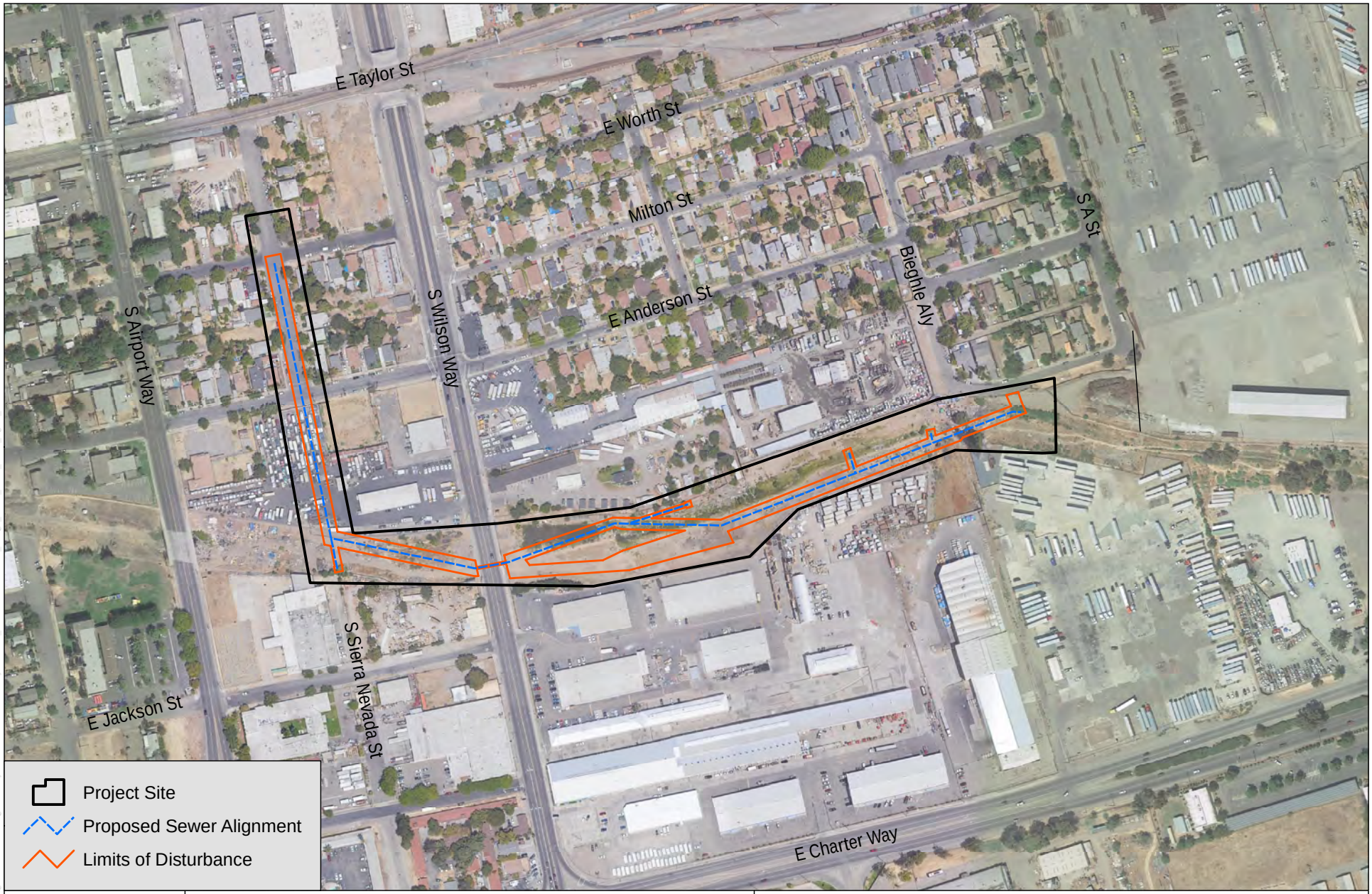


Figure 3

Moore Biological Consultants

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Map Date: 07/21/2022
Aerial Source: Google Earth (08/2019)

AERIAL

Mormon Slough Sanitary Sewer Rehabilitation Project

City of Stockton, San Joaquin County, CA

underground for several miles through downtown Stockton. To the west of the Wilson Way bridge, there is no defined low-flow channel and no evidence of recent surface flows.

The study area contains heaps of trash and debris from dumping and homeless encampments, several of which are located within the footprint of construction. Surrounding land uses are primarily residential commercial, and industrial (Figure 3). This portion of Stockton is heavily developed and lands to the north of the study area are primarily residential and the lands to the south are primarily industrial.

VEGETATION: Portions of Mormon Slough were completely dry during the field survey, while other areas contained small pockets of water supporting patches of emergent wetland vegetation and other hydrophytes. Adjacent areas are sparsely vegetated with highly disturbed ruderal grasses and weeds, consisting almost entirely of non-native species.

Oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), foxtail barley (*Hordeum murinum*), and perennial ryegrass (*Lolium perenne*) are some of the most common grasses in the ruderal grassland vegetation found within the study area. Other grassland species such as yellow star-thistle (*Centaurea solstitalis*), bull thistle (*Cirsium vulgare*), morning glory (*Convolvulus arvensis*), common sunflower (*Helianthus annuus*), prickly lettuce (*Lactuca serriola*), Canadian horseweed (*Erigeron canadensis*), and filaree (*Erodium* spp.) are intermixed with the grasses. There are patches of giant reed (*Arundo donax*) and tree-of-heaven (*Ailanthus altissima*) within the study area, primarily located along the north fence line in the east part of the study area. Table 1 is a list of plant species observed in the study area.

Immediately upstream of the box culvert inlet, a low area ponds water and is vegetated with common tule (*Schoenoplectus acutus*) and lesser amounts of cattails (*Typha sp*.) (Figure 4 and photographs in Attachment C). The inlet is in a

TABLE 1

PLANT SPECIES OBSERVED IN THE STUDY AREA

Ailanthus altissima	tree-of-heaven
Alnus rhombifolia	white alder
Amsinckia menziesii	rancher's fireweed
Arundo donax	giant reed
Avena sp.	wild oat
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft chess brome
Calandrinia menziesii	red maids
Capsella bursa var. pastoris	shepherds purse
Centaurea solstitialis	yellow star-thistle
Convolulus arvensis	morning glory
Cirsium vulgare	bull thistle
Cynara cardunculus	artichoke thistle
Cynodon dactylon	Bermuda grass
Cyperus eragrostis	tall flat sedge
Epilobium brachycarpum	annual fireweed
Erigeron canadensis	Canadian horseweed
Erodium botrys	filaree
Eucalyptus sp.	gum tree
Galium aparine	stickyweed
Geranium dissectum	dissected geranium
Helianthus annuus	common sunflower
Hordeum murinum	foxtail barley
Juglans californica	California black walnut
Lactuca serriola	prickly lettuce
Lolium perenne	perennial ryegrass
Malva neglecta	common mallow
Malvella leprosa	alkali mallow
Matricaria discoidea	pineapple weed
Medicago polymorpha	California burclover
Plantago lanceolata	English plantain
Poa annua	annual blue grass
Populus fremontii	Fremont cottonwood

TABLE 1

PLANT SPECIES OBSERVED IN THE STUDY AREA (continued)

Quercus agrifolia	coast live oak
Quercus lobata	valley oak
Rumex crispus	curly dock
Salix sp.	willow
Salsola tragus	Russian thistle
Senecio vulgaris	common groundsel
Sonchus asper	spiny sow thistle
Typha sp.	cattail
Xanthium strumarium	cocklebur

state of partial disrepair and some Mormon Sough flows trickle around the north edge of the box culvert inlet and flow west in to a low area between the box culvert inlet and the Wilson Way bridge. This low area supports a dense stand of emergent wetland vegetation, with common tule being the dominant species.

To the east of the emergent wetlands, Mormon Slough is best described as an ephemeral creek, conveying winter rains and summer nuisance water from agricultural lands to the east. Vegetation within and along the low-flow channel includes tall flat sedge (*Cyperus eragrostis*) and curly dock (*Rumex crispus*). There are also some small seedlings and saplings such as willows (*Salix sp.*), black walnut (*Juglans californica*), and small cottonwoods (*Populus fremontii*) along the edges of the creek.

There are only a few trees in the study area. There is a notable valley oak (*Quercus lobata*) and a relatively large gum tree (*Eucalyptus sp.*) in the east part of the study area. Other trees near the study area are primarily ornamental species associated with residences nearby. No blue elderberry shrubs (*Sambucus nigra ssp. caerulea*) were observed within or adjacent to the study area.

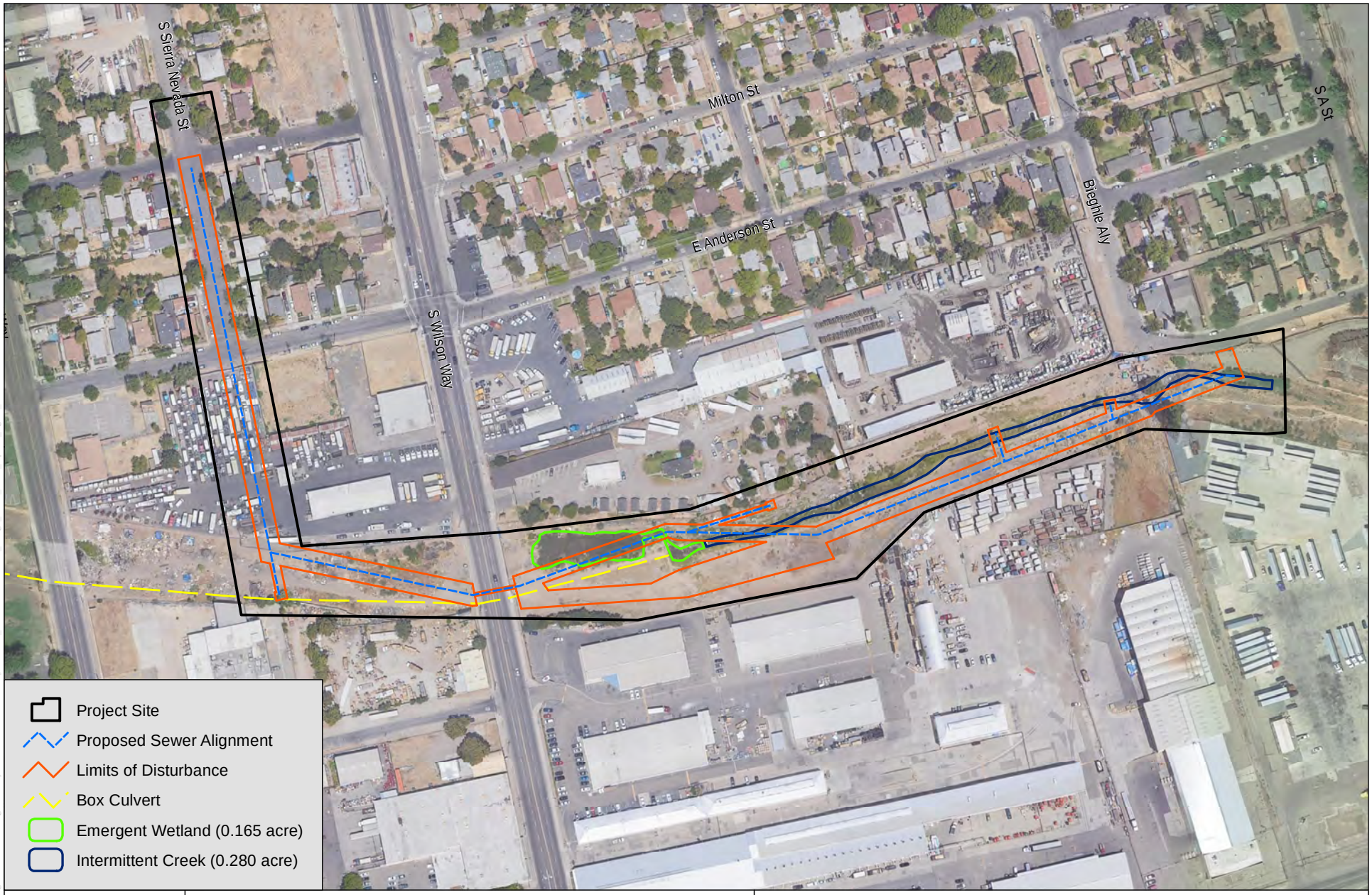

Figure 4

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Map Date: 07/29/2022
Aerial Source: Google Earth (08/2019)

Moore Biological Consultants

AQUATIC RESOURCES

Mormon Slough Sanitary Sewer Rehabilitation Project

City of Stockton, San Joaquin County, CA

WILDLIFE: A variety of common bird species were observed in the study area. American crow (*Corvus brachyrhynchos*), black phoebe (Sayornis nigricans), mourning dove (*Zenaida macroura*), Brewer's blackbird (*Euphagus cyanocephalus*), and house finch (*Carpodacus mexicanus*) are representative bird species observed in and near the study area (Table 2). All of these are species commonly found in urban areas in the greater project vicinity.

There are a few individual trees in and near the study area that are suitable for nesting raptors, including Swainson's hawks. Given the presence of trees and shrubs in and near the study area, and emergent wetland vegetation in the study area, it is likely one or more pairs of raptors and a variety of songbirds nest in and/or near the study area during most years. It is possible that ground-nesting songbirds such as killdeer and red-winged blackbird (*Agelaius phoeniceus*) nest in the grassland habitats in the study area. An American crow was observed nesting in a large tower near the east end of the study area during the survey.

A variety of mammals are likely to occur in the study area. While no mammals were observed in the study area during the recent survey; several California ground squirrel (*Otospermophilus beecheyi*) burrows were observed. Other species such as raccoon (*Procyon lotor*), coyote (*Canis latrans*), black-tailed hare (*Lepus californicus*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the greater project vicinity and may wander through the study area on occasion. A number of species of small rodents including mice (*Mus musculus, Reithrodontomys megalotis,* and *Peromyscus maniculatus*) and voles (*Microtus californicus*) also likely occur.

Based on habitat types present, only a few amphibian and reptile species are expected to use habitats in the study area. Although none were observed, common species such as western fence lizard (*Sceloporus occidentalis*), Pacific chorus frog (*Pseudacris regilla*), gopher snake (*Pituophis melanoleucus*), common king snake (*Lampropeltis getulus*), and common garter snake (*Thamnophis sirtalis*) are expected to occur at the study area.

TABLE 2

WILDLIFE SPECIES OBSERVED IN THE STUDY AREA

Birds	
Rock dove	*Columba livia*
Mourning dove	*Zenaida macroura*
Black phoebe	*Sayornis nigricans*
American crow	*Corvus brachyrhynchos*
Northern mockingbird	*Mimus polyglottos*
European starling	*Sturnus vulgaris*
Yellow-rumped warbler	*Setophaga coronata*
House sparrow	*Passer domesticus*
White-crowned sparrow	*Zonotrichia leucophrys*
Brewer's blackbird	*Euphagus cyanocephalus*
House finch	*Carpodacus mexicanus*
Mammals	
California ground squirrel	*Otospermophilus beecheyi*

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. Some jurisdictional waters of the U.S. also fall under the jurisdiction of CDFW and/or the California Regional Water Quality Control Board (RWQCB).

"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. 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 are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the ACOE *Wetlands Delineation Manual* and Regional Supplement (ACOE, 1987; 2008). Jurisdictional wetlands are usually adjacent to or hydrologically associated with Waters of the U.S. Isolated wetlands are outside federal jurisdiction, but may be regulated by RWQCB under the State Wetlands Program.

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.

There are approximately 0.280 acres of intermittent creek and 0.165 acres of emergent wetlands in the study area associated with Mormon Slough (see Aquatic Resources Delineation Map in Attachment D and photographs in Attachment C). No other areas meeting the technical and regulatory criteria of jurisdictional Waters of the U.S. or wetlands were observed in the study area.

As described above, Mormon Slough flows in to the study area from the east and continues west in a relatively narrow channel to the inlet to a large box culvert. This section of Mormon Slough is best described as an intermittent creek, conveying winter rains and summer nuisance water from lands to the east. The emergent wetlands are in close proximity to the culvert inlet as well as in a low area between the box culvert inlet and the Wilson Way bridge. To the west of the Wilson Way bridge, there is no defined low-flow channel and no evidence of recent surface flows.

Mormon Slough flows in to the San Joaquin River, a navigable Water of the U.S., several miles west of the study area. Mormon Slough is jurisdictional Water of the U.S. due to its tributary relationship to the San Joaquin River.

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. 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 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 presence of species with legal protection under the Endangered Species Act often represents a constraint to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a take of these species.

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, 2022). 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 3 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 study area. 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.

SPECIAL-STATUS PLANTS: Species of special-status plants identified in the CNDDB (2022) search include alkali milk-vetch (*Astragalus tener var. tener*), heartscale (*Atriplex cordulata*), big tarplant (*Blepharizonia plumosa*), watershield (*Brasenia schreberi*), palmate-bracted salty bird's-beak (*Chloropyron palmatum*), recurved larkspur (*Delphinium recurvatum*), San Joaquin spearscale (*Extriplex joaquinana*), woolly rose-mallow (*Hibiscus lasiocarpos var. occidentalis*), delta tule pea (*Lathyrus jepsonii var. jepsonii*), Sanford's arrowhead (*Sagittaria sanfordii*), Suisun marsh aster (*Symphotrichum lentum*), and saline clover (*Trifolium hydrophilum*) (Table 3 and Attachment B). No additional special-status plants are identified in the USFWS IPaC Trust Resource Report (Attachment B).

Special-status plants generally occur in relatively undisturbed areas in vegetation communities such as vernal pools, marshes and swamps, seasonal wetlands, riparian scrub, chenopod scrub, and areas with unusual soils. None of these vegetation communities occur in the study area. The ruderal grasslands adjacent to the slough are highly disturbed and do not provide suitable habitat for any of the plants in Table 3 or any other special-status plants.

TABLE 3

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 Study area
PLANTS						
Alkali milk-vetch	*Astragalus tener var. tener*	None	None	1B	Alkali vernal pools.	Unlikely: there are no vernal pools in the study area. The nearest occurrence of alkali milk-vetch in the CNDDB (2022) search area is approximately 2.5 miles northwest of the study area.
Heartscale	*Atriplex cordulata var cordulata*	None	None	1B	Valley and foothill grassland, chenopod scrub.	Unlikely: the grassland in the study area is highly disturbed and does not provide suitable habitat for heartscale. The nearest occurrence of this species in the CNDDB (2022) search area is an historical record (1896) whose location is not known; the record is mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.
Big tarplant	*Blepharizonia plumosa*	None	None	1B	Valley and foothill grassland.	Unlikely: the grasslands in the study area are highly disturbed and does not provide suitable habitat for big tarplant. The nearest occurrence of this species in the CNDDB (2022) search area is an historical record (1874) whose location is not known; the record is mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.
Watershield	*Brasenia schreberi*	None	None	2	Marshes and swamps.	Unlikely: the wetted portion of Mormon Slough provides low quality potential habitat for this species, however, watershield is almost entirely restricted to restricted to tidal delta waterways several miles west and northwest of the study area. The only occurrence of water shield in the CNDDB (2022) search area is an historical record is mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.
Palmate-bracted salty bird's-beak	*Chloropyron palmatum*	E	E	1B	Chenopod scrub, valley and foothill grassland.	Unlikely: the study area does not provide suitable habitat for this species. The nearest occurrence of palmate-bracted salty bird's-beak in the CNDDB (2022) search area is a historical record mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.

TABLE 3

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 Study area
Recurved larkspur	*Delphinium recurvatum*	None	None	1B	Chenopod scrub in alkaline soils.	Unlikely: the study area does not contain suitable habitat for this species. The CNDDB (2022) search area contains only one historical (1937) sighting of recurved larkspur, approximately 5.5 miles southeast of the study area.
San Joaquin spearscale	*Extriplex joaquinana*	None	None	1B	Chenopod scrub, alkali meadow, valley and foothill grassland.	Unlikely: the study area does not provide suitable habitat for this species. The nearest occurrence of San Joaquin spearscale in the CNDDB (2022) search area is a historical record mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.
Woolly rose mallow	*Hibiscus lasiocarpos var. occidentalis*	None	None	2	Freshwater marshes and swamps.	Unlikely: the wetted portion of Mormon Slough provides low quality potential habitat for this species, however, woolly rose mallow is almost entirely restricted to tidal delta waterways several miles west and northwest of the study area. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 5 miles northwest of the study area.
Delta tule pea	*Lathyrus jepsonii var. jepsonii*	None	None	1B	Marshes and swamps.	Unlikely: the wetted portion of Mormon Slough provides low quality potential habitat for this species, however, delta tule pea is almost entirely restricted to tidal delta waterways several miles west and northwest of the study area. The nearest occurrence of delta tule pea in the CNDDB (2022) search area is an historical population on Rough and Ready Island, approximately 4.5 miles west of the study area.
Sanford's arrowhead	*Sagittaria sanfordii*	None	None	1B	Standing or slow-moving freshwater ponds, marshes, and ditches.	Unlikely: the wetted portion of Mormon Slough provides low quality potential habitat for this species. The nearest occurrence of Sanford's arrowhead in the CNDDB (2022) search area is an historical population whose location is not known; the record is mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.

TABLE 3

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 Study area
Suisun marsh aster	*Symphotrichum lentum*	None	None	1B	Marshes and swamps.	Unlikely: the wetted portion of Mormon Slough could potentially support this species, however, Suisun marsh aster is almost entirely restricted to tidal delta waterways several miles west and northwest of the study area. The nearest occurrence of Suisun marsh aster in the CNDDB (2022) search area is in the Calaveras River, approximately 4 miles northwest of the study area.
Saline clover	*Trifolium hydrophilum*	None	None	1B	Marshes and swamps, mesic (wet) areas in valley and foothill grassland, vernal pools.	Unlikely: the study area does not provide suitable habitat for this species. The nearest occurrence of saline clover in the CNDDB (2022) search area is an historical population mapped non-specifically in downtown Stockton, approximately 2.5 miles northwest of the study area.
WILDLIFE						
Birds						
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: there is no suitable habitat for least Bell's vireo in or near the study area and this species is not known from the area. The nearest occurrence of least Bell's vireo in the CNDDB (2022) search area is an historical (1878) population whose location is not known; the record is mapped non-specifically in downtown Stockton, approximately 1.5 miles northwest of the study area.
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents.	Low: the grassland in the study area provides low quality, but potentially suitable foraging habitat for Swainson's hawk. This species may also nest in relatively large trees in and near the study area. There are numerous records of Swainson's hawks in the CNDDB (2022) search area, including several records within a mile of the study area.

TABLE 3

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 Study area
Tricolored blackbird	*Agelaius tricolor*	None	T	N/A	Requires open water and protected nesting substrate, usually cattails and riparian scrub with surrounding foraging habitat.	Unlikely: the emergent wetland vegetation (i.e., tules) just east of the Wilson Way bridge provide potentially suitable nesting habitat for tricolored blackbird. However, this species primarily nests in emergent wetlands near large open water environments and agricultural lands. The nearest occurrence of this species in the CNDDB (2022) search area is a large nonspecific record around the City of Stockton.
White-tailed kite	*Elanus leucurus*	None	FP	N/A	Herbaceous lowlands with variable tree growth and dense population of voles.	Unlikely: the grasslands in the study area provide low quality, but potentially suitable foraging habitat for white-tailed kite and this species may nest in large trees in and near the study area. The nearest occurrence of white-tailed kite in the CNDDB (2022) search area is approximately 1 mile southeast of the study area.
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	Unlikely: the on-study area grasslands are highly disturbed and provide poor quality habitat for burrowing owl; only a few ground squirrel burrows were observed. No burrowing owls were observed in or adjacent to the study area during the field survey and none of the burrows had evidence of past or current burrowing owl occupancy. The nearest occurrence of this species in the CNDDB (2022) is an older record (1993) approximately 0.5 miles south of the study area and was found within a parking lot at the San Joaquin County fairgrounds.
Mammals						
Riparian brush rabbit	*Sylvilagus bachmani riparius*	E	E	N/A	Riparian thickets in Stanislaus and southern San Joaquin Counties.	None: the study area and adjacent areas do not provide suitable habitat for riparian brush rabbit. There are no riparian thickets in the study area to support this species. There are no occurrences of riparian brush rabbit recorded in the CNDDB (2022) in the search area.

TABLE 3

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 Study area
Reptiles & Amphibians						
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 study area for California tiger salamander. This species occurs in the transitional bands between the valley floor and foothills. The nearest occurrence of California tiger salamander in the CNDDB (2022) search area is a historical record (1923) in downtown Stockton, approximately 2.5 miles northwest of the study area. The study area is not within designated critical habitat for California tiger salamander (USFWS, 2005a).
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: this section of Mormon Sough does not provide suitable aquatic habitat for giant garter snake, primarily due to its ephemeral flow regime. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 3 miles northeast of the study area.
Western pond turtle	*Emys marmorata*	None	SC	N/A	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.	Unlikely: this section of Mormon Sough does not provide suitable aquatic habitat for western pond turtle, primarily due to its ephemeral flow regime. There are no occurrences of this species in the CNDDB (2022) search area.
Western spadefoot	*Spea hammondii*	None	SC	N/A	Breeds and lays eggs in seasonal water bodies such as deep vernal pools or stock ponds.	Unlikely: there is no suitable aquatic habitat for western spadefoot in or near the study area. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 3 miles southwest of the study area.
Fish						
Delta smelt	*Hypomesus transpacificus*	T	E	N/A	Shallow lower delta waterways with submersed aquatic plants and other suitable refugia.	Unlikely: there is no suitable aquatic habitat in the study area for delta smelt. The nearest occurrence of this species in the CNDDB (2022) approximately 5.5 miles northwest of the study area. The study area is not in designated critical habitat for delta smelt (USFWS, 1994).

TABLE 3

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 Study area
Longfin smelt	*Spirinchus thaleichthys*	C	T	N/A	Brackish estuarine habitats.	Unlikely: there is no suitable aquatic habitat in the study area to support this species. The nearest occurrence of longfin smelt in the CNDDB (2022) approximately 6 miles northwest of the study area.
Steelhead – Central Valley DPS	*Oncorhynchus mykiss irideus pop. 11*	T	None	N/A	Riffle and pool complexes with adequate spawning substrates within Central Valley drainages.	Unlikely: Central Valley steelhead may have historically utilized this section of Mormon Slough, but the slough is now piped underground through downtown Stockton. Central Valley steelhead could potentially migrate up and down this slough during flood flows. The CNDDB (2022) contains records of steelhead within Mormon Slough.
Green sturgeon	*Acipenser medirostris*	T	None	N/A	Spawns in the Sacramento, Feather and Yuba Rivers and possibly in Upper Stanislaus and San Joaquin River. Delta important for rearing.	Unlikely: Mormon Slough does not provide suitable aquatic habitat to support green sturgeon. The nearest occurrence of this species in the CNDDB (2022) search area is approximately 3.5 miles west of the study area.
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 study area. There are no occurrences of valley elderberry longhorn beetle recorded in the CNDDB (2022) in the search area.
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools	Unlikely: there are no vernal pools in the study area. There are no occurrences of vernal pool fairy shrimp recorded in the CNDDB (2022) in the search area. The study area is not within designated critical habitat for vernal pool fairy shrimp (USFWS, 2005b).

TABLE 3

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 Study area
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools	Unlikely: there are no vernal pools in the study area. There are no occurrences of vernal pool tadpole shrimp recorded in the CNDDB (2022) in the search area. The study area is not within designated critical habitat for vernal pool tadpole shrimp (USFWS, 2005b).
Monarch butterfly	*Danaus plexippus*	C	None	N/A	Variety of habitats in California; larvae dependent on milkweed. Overwinters primarily along the coast.	Unlikely: monarch butterfly may fly over the study area during its migration, but would not be expected to occur in the study area due to a lack of suitable habitat; no milkweed plants were observed. There are no occurrences of this species in the CNDDB (2022) search area.

1 T= Threatened; E = Endangered; C = Candidate.

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

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.

Sanford's arrowhead could potentially occur within Mormon Slough, although the habitat suitability is very low. This species is known to occur in standing or slow-moving freshwater ponds, marshes, and ditches. Sanford's arrowhead is primarily found in delta waterways several miles west of the study area and there is only one occurrence of this in the 120+/- square mile CNDDB (2022) search area. Due to being so far east and well outside lands with tidal influence, Mormon Slough does not provide suitable habitat for any of the other special-status plants in Table 3 that are associated with aquatic habitats.

SPECIAL-STATUS WILDLIFE: The potential for intensive use of habitats within the study area by special-status wildlife species is generally low. Special-status wildlife species that have been recorded in greater project vicinity in the CNDDB (2022) include least Bell's vireo (*Vireo bellii pusillus*), Swainson's hawk, tricolored blackbird (*Agelaius tricolor*), white-tailed kite (*Elanus leucurus*), burrowing owl, California tiger salamander (*Ambystoma californiense*), giant garter snake (*Thamnophis gigas*), western spadefoot (*Spea hammondii*), delta smelt (*Hypomesus transpacificus*), longfin smelt (*Spirinchus thaleichthys*), and Central Valley steelhead (*Oncorhynchus mykiss*).

Although not included in the CNDDB within the search area, riparian brush rabbit (*Sylvilagus bachmani riparius*), green sturgeon (*Acipenser medirostris*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), and monarch butterfly (*Danaus plexippus*) were added to Table 3 because they are included in the USFWS IPaC Trust Resource Report (Attachment B). Western pond turtle (*Emys marmorata*) was added to Table 3 because this turtle is known to occur in similar drainages in the general project vicinity.

The study area and surrounding areas may have provided habitat for the special-status wildlife species listed in Table 3 at some time in the past. However, development, and construction and maintenance of roads and utilities, have

substantially modified natural habitats within the greater project vicinity, including within the study area. Of the wildlife species identified in the CNDDB, Swainson's hawk, burrowing owl, tricolored blackbird, and western pond turtle are the only species with potential to occur in the study area on more than a transitory or very occasional basis. The birds could be disturbed by noise if they nested in or near the study area during construction and western pond turtle could be disturbed if it is present within Mormon Slough or nested adjacent to the slough during project construction.

SWAINSON'S HAWK: The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawks occur in the Central Valley primarily during their breeding season, a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their breeding territories by late August.

The CNDDB (2022) contains several records of nesting Swainson's hawk in the greater project vicinity, including several within a mile of the study area. There are a few suitable nest trees in the study area and several large trees in close proximity to the study area. Although the study area is within a heavily developed portion of Stockton, annual cropland and grasslands in the region provide suitable foraging habitat for this species. No Swainson's hawks were observed in

the study area during the 2021 survey, which was conducted near the beginning of the nesting season of this species.

The project will participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (HCP) (SJCOG, 2000). Standard Incidental Take Minimization Measures (ITMMs) under the HCP outline protective measures for Swainson's hawk. In the event that construction commences during the nesting season (i.e., if construction starts between March 1 and August 31) and Swainson's hawks are nesting in or adjacent to the study area, a construction setback from the nest tree would be required until nesting is complete. The setback is calculated as twice the diameter of the dripline of the nest tree as measured from under the nest, and is usually less than 100 feet.

BURROWING OWL: The Migratory Bird Treaty Act and Fish and Game Code of California protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation; burrowing owls that nest in the Central Valley may winter elsewhere.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk. The nearest record of this species in the CNDDB (2022) search area is approximately 0.5 miles south of the study area.

The intensity of development surrounding the study area reduces the likelihood of burrowing owls using the study area for nesting. No burrowing owls were observed in the study area during the recent survey. Only a few ground squirrel

burrows were observed, none of which had evidence of past or current burrowing owl occupancy. This species may utilize habitats in the study area for nesting in the future If burrow habitat is available.

Standard ITMMs under the HCP outline protective measures for burrowing owl. If construction is scheduled to commence outside the nesting season (i.e., if construction starts between September 1 and January 31) and burrowing owls are present in the study area, they can be passively relocated. In the event that construction commences during the nesting season and burrowing owls are present in the study area, a 250-foot construction setback from the natal burrow would be required until nesting is complete.

TRICOLORED BLACKBIRD: The tricolored blackbird is a State of California Species threatened species and is also protected by the federal MBTA and Fish and Game Code of California. Tricolored blackbirds are colonial nesters requiring very dense stands of emergent wetland vegetation and/or dense thickets of wild rose or blackberries for nesting. Preferred nesting substrates are expansive stands of cattails and tules adjacent to open water. There is a large, nonspecific record of nesting tricolored blackbird in the CNDDB (2022) encompassing the city of Stockton, including the study area.

Tricolored blackbirds were not observed in the study area during the field survey. Within the study area, nesting habitat is limited and fragmented with the most suitable habitat being the large patch of tules and cattails between the inlet to the box culvert and the Wilson Way bridge. However, this species primarily nests in emergent wetlands near large open water environments and agricultural lands, neither of which are present in the study area. Although the patch of tules and cattails is small and surrounded by development, tricolored blackbirds could potentially nest in this area in future years.

Pursuant to the HCP, if construction is scheduled to commence during the tricolored blackbird nesting season (i.e., if construction starts between March 1

and June 30) and tricolored blackbirds are present in the study area, a 500-foot construction setback from the nests would be required until nesting is complete.

WESTERN POND TURTLE: The western pond turtle is a state species of concern, but is not a listed species at the state or federal level. Western pond turtles are associated with permanent or nearly permanent bodies of water with adequate basking sites such as logs, rocks or open mud banks. Pond turtles construct nests in sandy banks along slow-moving streams and ponds in the spring and the young usually hatch in 2 to 3 months. There are no records of western pond turtle in the CNDDB (2022) search area.

Mormon Slough is ephemeral and is dry much of the year. Western pond turtles are known to occur in similar drainages in the general region and could potentially swim and bask within Mormon Slough if adequate aquatic conditions are met. Although the grasslands surrounding the slough are highly disturbed, this species could potentially nest in upland habitats near the creek.

Pursuant to the HCP, Mormon Slough is considered “potential habitat” for western pond turtle, triggering an automatic “no construction” buffer extending 300 feet from the centerline of the creek, unless a buffer reduction is granted by SJCOG. Buffer reductions are common for parcels along drainages and will be needed for this project. Standard ITMMs related to preconstruction surveys for western pond turtle will still be required, and temporary construction setbacks from nests will be implemented in the event active nests are located.

OTHER SPECIAL-STATUS SPECIES: A few other special-status birds may fly over or forage in the area on occasion, but would not be expected to nest in the study area. The study area lacks riparian habitat vegetation to support nesting least Bell’s vireo. There is no suitable riparian scrub habitat to support riparian brush rabbit. The study area does not provide suitable aquatic habitat for any special-status fish, or California tiger salamander. There are no blue elderberry shrubs in the study area, precluding the potential occurrence of valley elderberry

longhorn beetle. There are no vernal pools or seasonal wetlands in the study area for vernal pool branchiopods (i.e., fairy and tadpole shrimp). Finally, monarch butterfly could conceivably fly over the study area during its migration, but is unlikely to utilize the study area in a meaningful capacity; no areas of milkweed were observed and this species primarily overwinters much closer to the coast of California.

While Mormon Slough is considered "potential habitat" for giant garter snake pursuant to the HCP, this section of the slough is entirely unsuitable for this species. The section of Mormon Slough in the study area is separated from delta waterways by the box culvert, precluding movement of giant garter snakes in to the study area from the delta. Due to its flow regime, the section of Mormon Slough in the study area also does not contain the requisite habitat components of this species.

SAN JOAQUIN COUNTY MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN (HCP): The project will participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (HCP) (SJCOG, 2000). The HCP involves the payment of fees and implementation of ITMMs to avoid impacts on nesting birds and other special-status species. The Mormon Slough corridor is mapped as "Natural Lands" in the HCP, while adjacent developed areas are mapped as "Fee Exempt" (Attachment E). The HCP per-acre fee for Natural Lands is currently $19,561.00 per acre.

Due to the need for permits from ACOE and CDFW for work in Mormon Slough, the project had be approved for participation in the plan by SJCOG. Seeking approval for participation is routine for projects that also require permits from regulatory agencies for work in jurisdictional aquatic habitats. In January 2022, the project was approved to participate in the HCP by Habitat Technical Advisory Committee (HTAC) and SJOCG Board.

CRITICAL HABITAT: The study area is not within designated critical habitat of California red-legged frog (USFWS, 2006), California tiger salamander (USFWS, 2005a), federally listed vernal pool shrimp or plants (USFWS, 2005b), delta smelt (USFWS, 1994), valley elderberry longhorn beetle (USFWS, 1980), Central Valley steelhead (NOAA, 2005), green sturgeon (NOAA, 2005) or any other federally listed species (Attachment E).

Conclusions and Recommendations

- The study area is in in downtown Stockton and consists of the Mormon Slough channel and adjacent industrial land. The area has been overtaken by the homeless, with trash and encampments throughout much of the project footprint. No sensitive natural communities were observed in the study area; the habitats are highly disturbed and biologically unremarkable.

- There are approximately 0.280 acres of intermittent stream and 0.165 acres of emergent wetlands in the study area associated with Mormon Slough.

- Avoidance of jurisdictional Waters of the U.S. and wetlands and wetlands is recommended, to the maximum extent practicable. With the exception of three areas where the sewer line must cross the creek, the active channel of Mormon Slough will be avoided. Construction of the project is anticipated to involve 0.11 acres of temporary impacts to jurisdictional Waters of the U.S. and wetlands.

- Permits from ACOE, CDFW, RWQCB, and the Central Valley Flood Protection Board (CVFPB) will be needed prior to the placement of any fill material (e.g., culverts, fill dirt, rock) in Mormon Slough. As the estimated fill (i.e., temporary disturbance) in Waters of the U.S. is expected to be only 0.11 acres, the work would be authorized by ACOE under a Nationwide Permit (NWP).

- Due to a lack of suitable habitat, it is unlikely that special-status plants occur in the study area.

- With the exception of Swainson's hawk, burrowing owl, tricolored blackbird, and western pond turtle, no special-status wildlife species are expected to occur in or near the study area on more than a very occasional or transitory basis.

- Standard Take Avoidance measures outlined in the HCP for nesting Swainson's hawks and burrowing owl will be required. These will include pre-construction surveys for nesting Swainson's hawks within 0.5 miles of the study area for construction activities between March 1 and September 15 and pre-construction surveys for nesting burrowing owls within 250 feet of the study area for construction activities between February 1 through August 31. If active nests are found, temporal restrictions on construction that are specified in the HCP will be required.

- Standard Take Avoidance measures outlined in the HCP for nesting tricolored blackbirds may be required. These would include pre-construction surveys for construction activities during the nesting season. If active nests are found, a 500-foot construction setback from the nests would be required until nesting is complete.

- Due to a lack of suitable habitat, giant garter snake and western pond turtle are not expected to occur in the study area. Nevertheless, standard Take Avoidance measures for these species outlined in the HCP, primarily consisting of pre-construction surveys, are expected to be included in the ITMMs.

- Trees, shrubs, and grasslands in and near the study area could be used by birds protected by the MBTA and/or Fish and Game Code of California, such as white-tailed kite, loggerhead shrike, and red-winged blackbird.

Standard Take Avoidance measures outlined in the HCP for nesting birds will be required within 14 days of the start of construction. If active nests are found, restrictions on construction that are specified in the HCP will be required. These setbacks vary by species.

- The study area is not within areas that are designated as critical habitat for federally listed species.

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

Sincerely,

Diane S. Moore, M.S.
Principal Biologist

References and Literature Consulted

ACOE (U.S. Army Corps of Engineers). 1987. Technical Report Y87-1. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI.

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Sawyer & Keeler-Wolf. 1995. A Manual of California Vegetation. California Native Plant Society, Sacramento. California.

SJCOG (San Joaquin Council of Governments). 2000. San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). Stockton, California. November 15.

USFWS (United States Fish and Wildlife Service). 1980. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17. Listing the Valley Elderberry Longhorn Beetle as a Threatened Species with Critical Habitat. Federal Register 45 No. 155, pp. 52803-52807, August 8.

USFWS. 1994. Final Critical Habitat for the Delta Smelt (*Hypomesus transpacificus*). Federal Register Vol. 59, No. 242, December 19, 1994, pp. 65256 – 65279.

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USFWS. 2005b. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for Four Vernal Pool Crustaceans and Eleven Vernal Pool Plants in California and Southern Oregon; Evaluation and Economic Exclusions from August 2003 Final Designation, Final Rule. Federal Register Vol. 70, No. 154, August 11.

USFWS. 2006. Part II, Department of the Interior, Fish and Wildlife Service. 50 CFR Part 17: Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for California Red-Legged Frog, and Special Rule Exemption Associated with Final Listing for Existing Routine Ranching Activities, Final Rule. Federal Register Vol. 71, No. 71, April 13.

USFWS. 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). U.S. Fish and Wildlife Service; Sacramento, California. 28pp.

Attachment A

Site Plan

LEGEND:

- PROJECT LIMITS
- PROPOSED ALIGNMENT
- PARCELS

NORTH ORIENTATION

KSN inc. KJELDSEN SINNOCK NEUDECK
CIVIL ENGINEERS & LAND SURVEYORS
www.ksninc.com
711 N. Pershing Avenue
Stockton, CA 95203
209-946-0268
1550 Harbor Blvd., Suite 212
West Sacramento, CA 95691
916-403-5900

CITY OF STOCKTON MORMON SLOUGH SANITARY SEWER REHABILITATION PROJECT PROJECT LIMITS

DRAWING SCALE: 1" = 100'

ORIGINAL DRAWING SCALE: 0 ½" 1"

EXHIBIT NO. A

PAGE NO. 1 OF 1

FILE SPEC: P:\2406_COS-Mormon_Slough_SS_Rehab\0010_Mor_SS-Rehab\08_Civil\400_Plans\020_CAD\Exhibits\220428_Mormon Slough Project Limits.dwg
PLOT DATE: Apr 29, 2022 - 8:38am

Attachment B

CNDDB Summary Report and Exhibits & USFWS

IPaC Trust Report

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Stockton East (3712182) OR Stockton West (3712183))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acipenser medirostris pop. 1 green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	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	G1G2	S1S2	1B.1
Brasenia schreberi watershield	PDCAB01010	None	None	G5	S3	2B.3
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Chloropyron palmatum palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
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 pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC

Selected Elements by Scientific Name

California Department of Fish and Wildlife

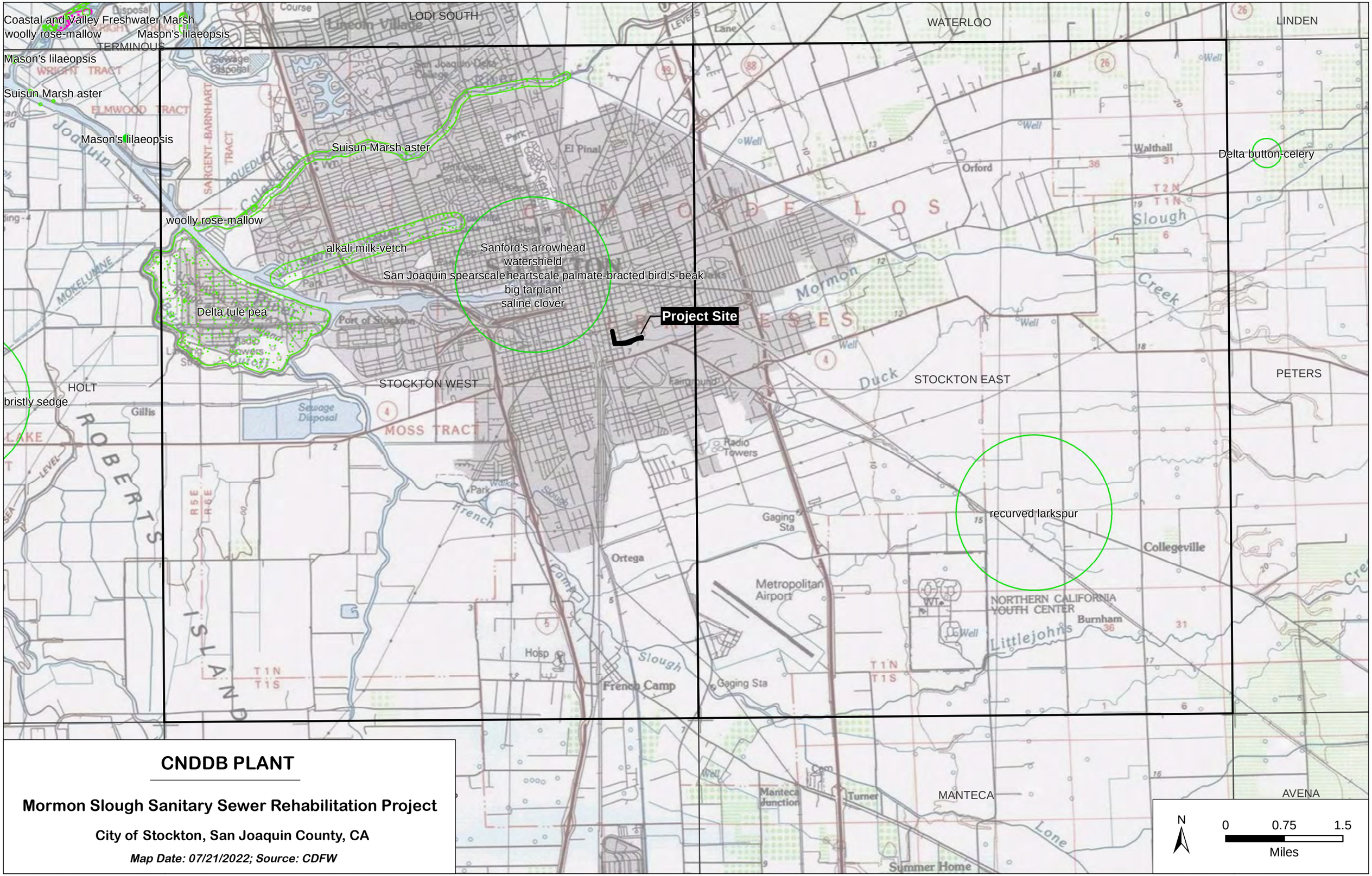
California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Symphyotrichum lentum Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
Thamnophis gigas giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
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: 25

Coastal and Valley Freshwater Marsh
woolly rose-mallow
Mason's lilaeopsis
TERMINOUS
Mason's lilaeopsis
Suisun Marsh aster
Mason's lilaeopsis
Suisun Marsh aster
woolly rose-mallow
alkali milk-vetch
Sanford's arrowhead
watershield
San Joaquin spearscale
heartscale
palmate-bracted bird's-beak
big tarplant
saline clover
Delta tule pea
Project Site
bristly sedge
recurved larkspur
Delta button-celery

LODI SOUTH
WATERLOO
LINDEN
HOLT
STOCKTON WEST
STOCKTON EAST
PETERS
MANTECA
AVENA



CNDDB PLANT

Mormon Slough Sanitary Sewer Rehabilitation Project

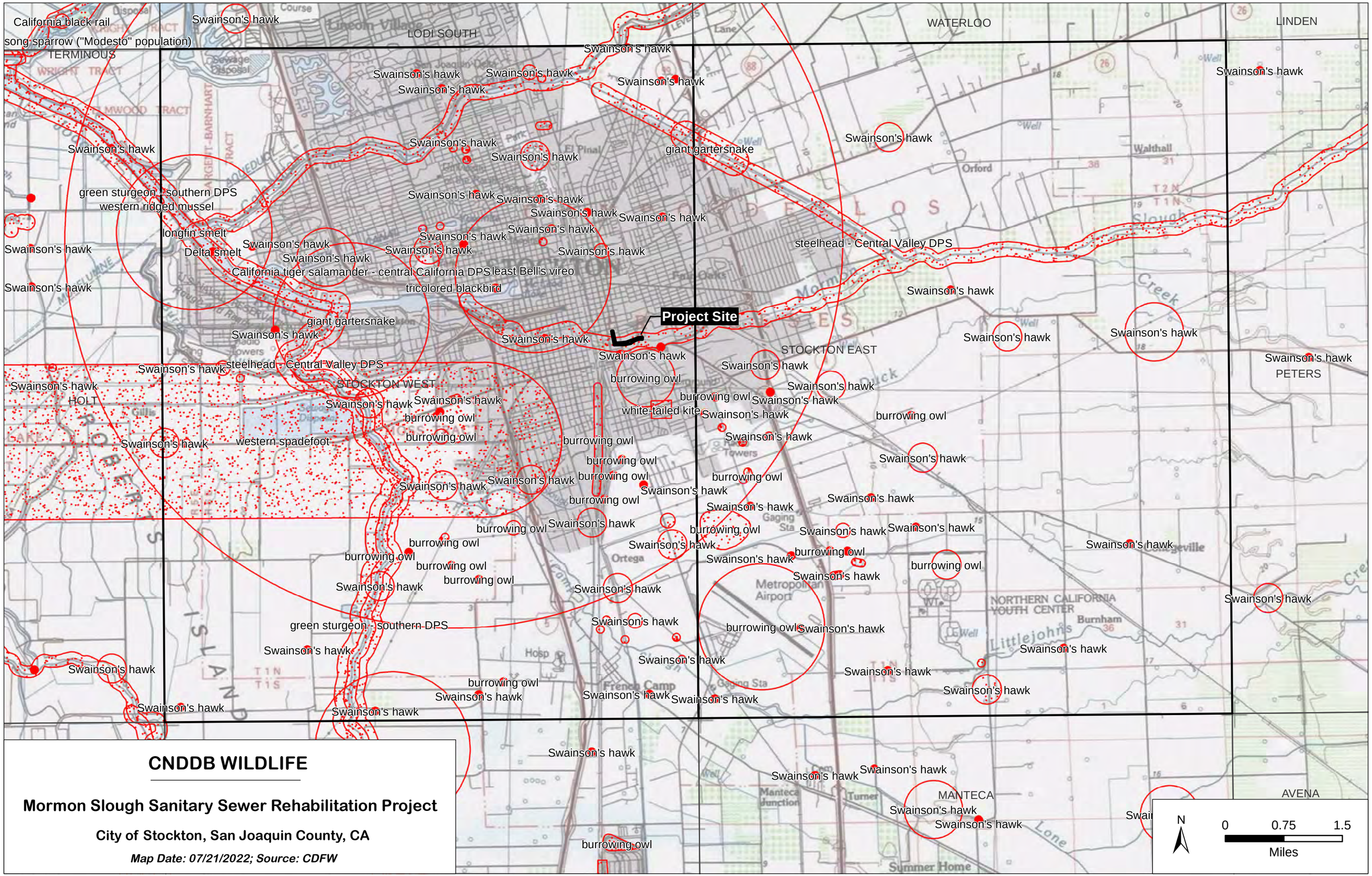
City of Stockton, San Joaquin County, CA

Map Date: 07/21/2022; Source: CDFW

N

0 0.75 1.5

Miles



CNDDB WILDLIFE

Mormon Slough Sanitary Sewer Rehabilitation Project

City of Stockton, San Joaquin County, CA

Map Date: 07/21/2022; Source: CDFW

IPaC **U.S. Fish & Wildlife Service**

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 office

Sacramento Fish And Wildlife Office

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

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

Endangered species

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

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

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

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

1. 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] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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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. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Mammals

NAME	STATUS
Riparian Brush Rabbit Sylvilagus bachmani riparius Wherever found 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 Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Candidate
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/7850

Crustaceans

NAME	STATUS

Vernal Pool Fairy Shrimp Branchinecta lynchi — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi — Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2246

Flowering Plants

NAME	STATUS

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

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY

BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Lawrence's Goldfinch Carduelis lawrencei — Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9464

Long-eared Owl asio otus — Breeds Mar 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Olive-sided Flycatcher Contopus cooperi — Breeds May 20 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3914

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

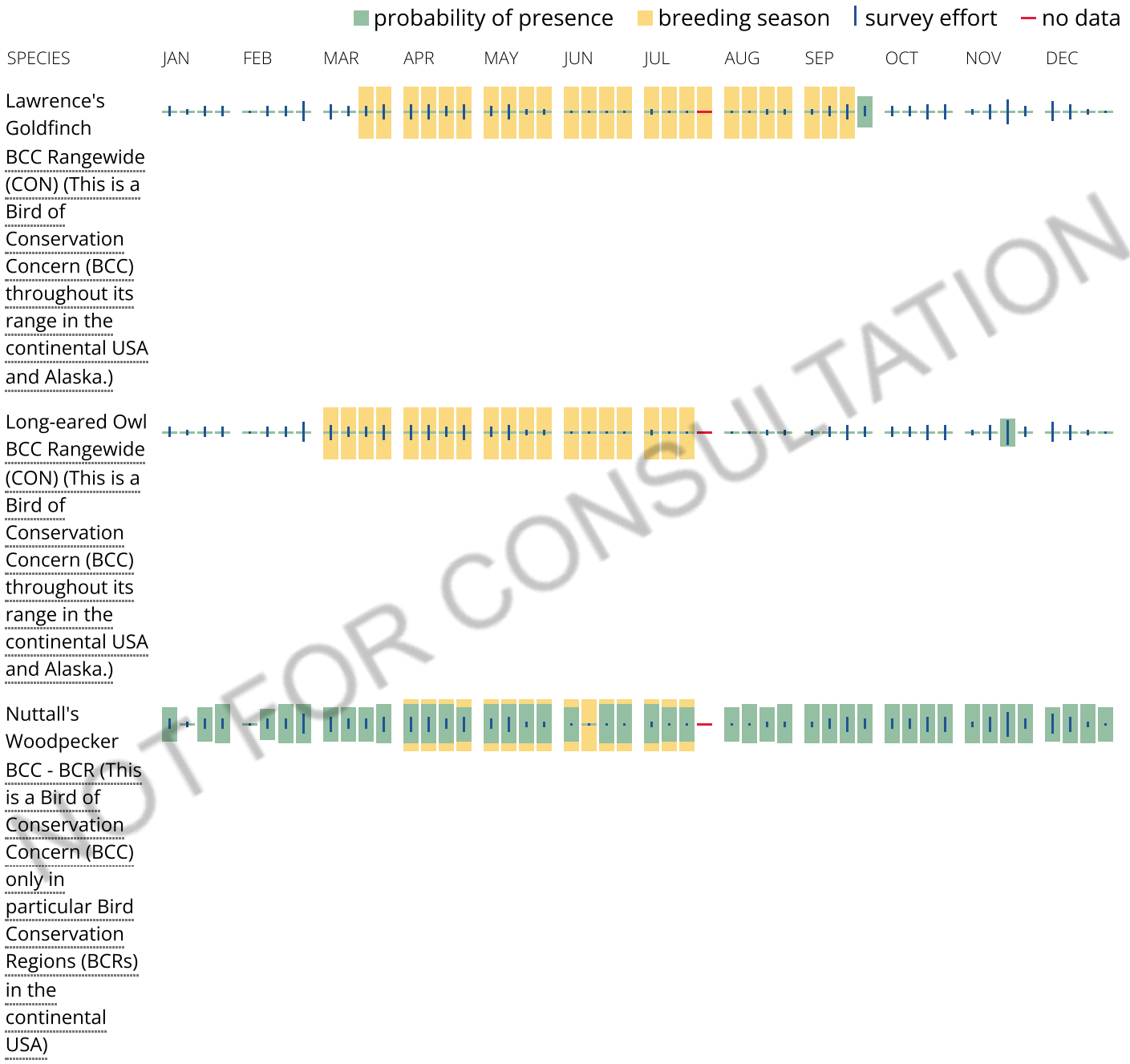
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

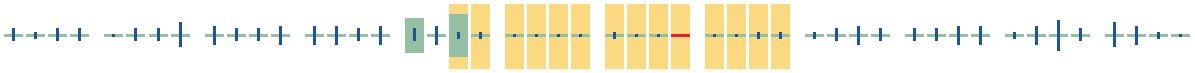
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

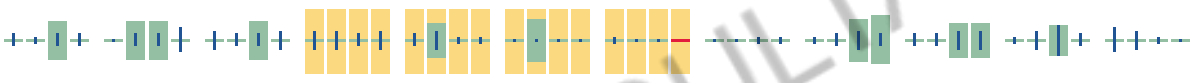


Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Olive-sided Flycatcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid

cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

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

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

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

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

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

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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 NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the John H. Chafee Coastal Barrier Resources System (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local Ecological Services Field Office or visit the CBRA Consultations website. The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the official CBRS maps. The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS 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.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

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

Mormon Slough in the east part of the site, looking northwest; 04/09/21.

Upland area adjacent to Mormon Slough in the east part of the site, looking northwest; 04/09/21.

Man hole cover within Mormon Slough in the east part of the site, looking west; 04/09/21.

Upland area just south of Mormon Slough, looking west from the east part of the site; 04/09/21.

Recently wetted portion of Mormon Slough, looking west from the approximate central part of the site; 04/09/21.

Wetted portion of Mormon Slough, looking west from the approximate central part of the site; 04/09/21. This photo was taken approximately 100 feet further downstream from the photo above.

Patch of dense tules at the upstream end of a large box culvert within Mormon Slough; 04/09/21. This is the inlet to a long underground culvert system that conveys flows to the west.

Top of the underground culvert system shown in the photo above, looking west from just downstream of the culvert inlet; 04/09/21.

Trash and a patch of tules just downstream of the box culvert inlet area, looking northwest; 04/09/21. Water seeps around the north edge of the culvert inlet and ponds water in a low area upstream of the bridge.

Tule patch downstream of the box culvert inlet, looking west; 04/09/21.

Wilson Way bridge, looking northwest from the east side of the bridge; 04/09/21. There was no evidence of nesting swallows under the bridge.

Mormon Slough just upstream of the Wilson Way bridge, looking east; 04/09/21.

Mormon Slough channel just downstream of the Wilson Way bridge, looking west; 04/09/21.

Ruderal grassland just downstream of the Wilson Way bridge, looking west; 04/09/21. This historical portion of the slough has been rerouted through an underground box culvert and this area no longer shows signs of an active channel.

Fenced off automobile facility at the west end of the site, looking north from where the alignment bends to the north; 04/09/21.

Automobile facility at the west end of the site, looking south from Anderson Street; 04/09/21.

Man hole within Anderson Street, looking south; 04/09/21.

Approximate location of the potential maintenance hole site east of the main work area, looking northwest; 04/09/21.

Attachment D

Aquatic Resources Delineation Map

Prepared By:

Salix consulting, inc.

Prepared For:

Diane Moore
Moore Biological Consulting
10330 Twin Cities Road, Suite 30
Galt, CA 95632-9043

DELINEATED BY: J. Glazner
DRAWN BY: H. Gallant
COORDINATE SYSTEM: NAD83 CA State Plane III USFT
IMAGERY: Google Earth 09/2020

N

0 75 150

Feet

- Alignment Markers
- Wetland Data Point
- Upland Data Point
- Intermittent Stream
- Seasonal Marsh

Aquatic Resources

Intermittent Stream		Acreage	Seasonal Marsh		Acreage
IS-1		0.280	SM-1		0.165
	Subtotal	**0.280**		**Subtotal**	**0.165**

Total: 0.445 Acre

Figure 5

AQUATIC RESOURCES DELINEATION MAP

Mormon Slough

City of Stockton, CA

July 14, 2022

Attachment E

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan: Stockton Area Compensation Map & 2022 Fee Schedule

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

LAND CATEGORY / PAY ZONES

- **CATEGORY A**
  EXEMPT
  NO PAY ZONE
- **CATEGORY B**
  OTHER OPEN SPACES
  PAY ZONE A
- **CATEGORY C**
  AG. HABITAT OPEN SPACES
  PAY ZONE B (Agricultural)
- **CATEGORY D**
  NATURAL LANDS HABITAT
  PAY ZONE B (Natural)
- **CATEGORY E**
  VERNAL POOLS
  PAY ZONE C
- **CATEGORY F**
  PRIOR AGREEMENT

Compensation Map Certification
We, the undersigned, being the representatives of the Permitting Agencies as defined in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), do hereby certify that this compensation map dated June 4, 2004 for the City of Stockton to be in conformity with the provisions of the SJMSCP and shall be utilized in the manner as established in the SJMSCP.

_____ Date:_____	_____ Date:_____
Ken Sanchez Assistant Field Supervisor Endangered Species Program U.S. Fish and Wildlife Service	Terry Roscoe Habitat Conservation Supervisor California Department of Fish and Game

STOCKTON HABITAT AREA

San Joaquin Council of Governments
555 East Weber Avenue
Stockton, CA 95202

N W E S

0.5 0.25 0 0.5 1 1.5 2
Miles

June 4, 2004

SJCOG, Inc.

555 East Weber Avenue ● Stockton, CA 95202 ● (209) 235-0600 ● FAX (209) 235-0438

San Joaquin County Multi-Species Habitat Conservation & Open Space Plan (SJMSCP)

2022 Updated Habitat Fees*

Habitat Type	Fee Per Acre
Multi-Purpose Open Space	$9,781
Natural	$19,561
Agriculture	$19,561
Vernal Pool - uplands	$80,453
Vernal Pool - wetted	$174,040

* Effective January 1, 2022 – December 31, 2022

2022 Endowment Fees with In-lieu Land**

Type of Preserve	*Enhancement Cost/acre*	*Land Management Cost/acre*	TOTAL PER ACRE ENDOWMENT
Agricultural Habitat Lands	$5,256.00	$710.96	**$5,966.96**
Natural Lands	$5,256.00	$710.96	**$5,966.96**
Vernal Pool Habitat			
Vernal Pool Grasslands	$13,390.00	$1,756.01	**$15,146.01**
Vernal Pool Wetted	$108,136.00	$1,721.56	**$109,857.56**

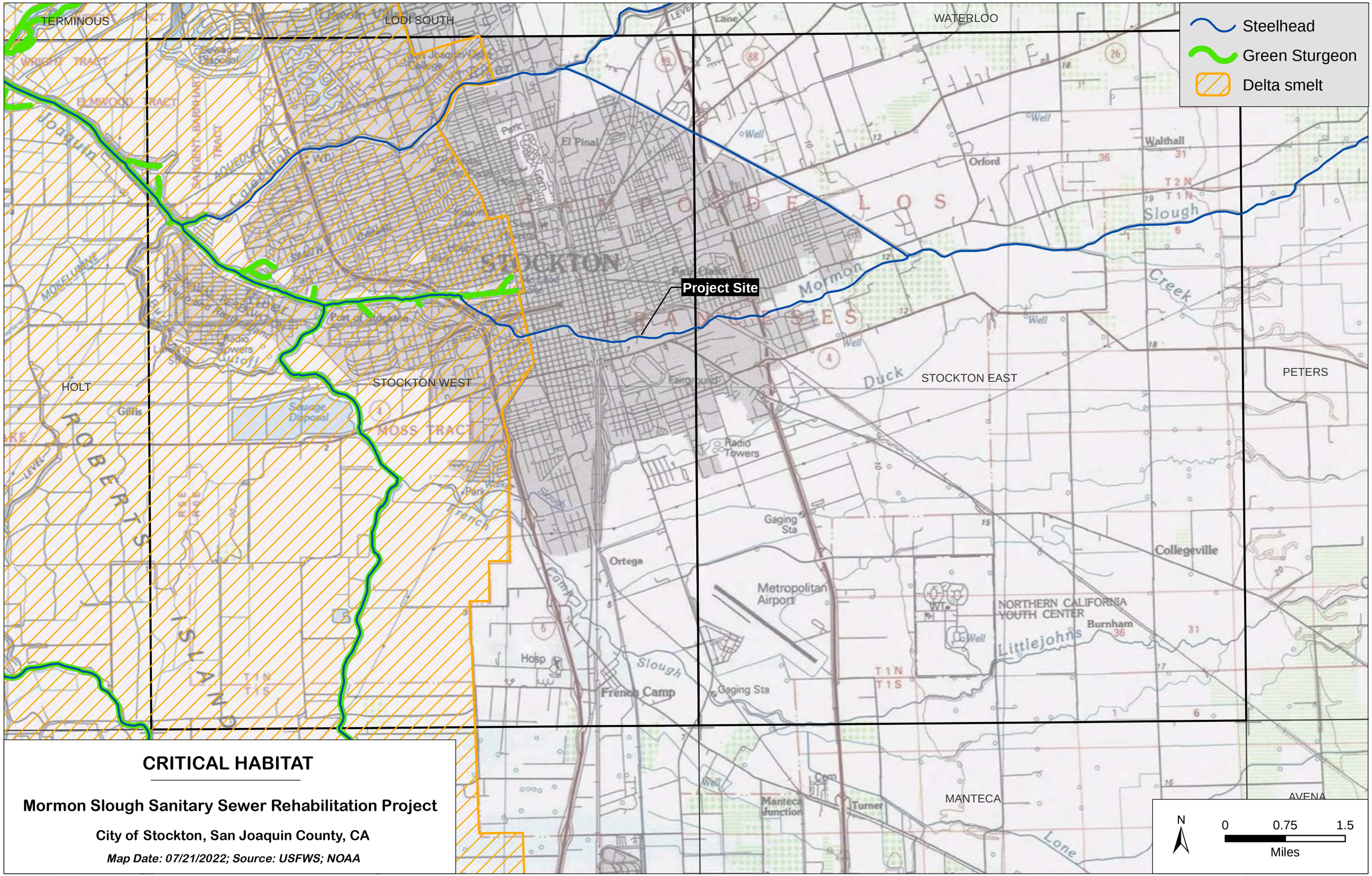
** Effective January 1, 2022 – December 31, 2022 in lieu of fees to be used as the endowment for the dedicated land preserves (Category B + C) based on impacted acres.

VELB Mitigation

A special fee category shall apply when removal of the Valley Elderberry Long-horned Beatle (VELB) habitat of elderberry shrubs occurs. The fee shall be paid to SJCOG, Inc. or a VELB mitigation bank approved by the Permitting Agencies. The current fee, as established in the VELB Conservation Fund Account managed by the Center for Natural Lands Management, and approved by the USFWS, is $1,800 per VELB Unit (one unit= one stem over 1" in diameter at ground level which is removed). Fees shall be established by the JPA during preconstruction surveys (i.e., counts of stems to be removed with and without exit holes shall be completed during preconstruction surveys) and shall be paid to the JPA prior to ground disturbance or stem removal, whichever comes first.

Attachment F

Designated Critical Habitat



CRITICAL HABITAT

Mormon Slough Sanitary Sewer Rehabilitation Project

City of Stockton, San Joaquin County, CA

Map Date: 07/21/2022; Source: USFWS; NOAA

APPENDIX C
CULTURAL RESOURCE REPORT

CULTURAL RESOURCES INVENTORY AND EVALUATION REPORT
MORMON SLOUGH SANITARY SEWER REHABILITATION PROJECT

CITY OF STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA

—♦♦♦—

Prepared for:

Basecamp Environmental, Inc.
115 South School St.
Suite 14
Lodi, CA 95240

Submitted by:

Brian Ludwig, Ph.D., R.P.A.
Jason A. Coleman, M.A., R.P.A.

Solano Archaeological Services
131 Sunset Avenue, Suite E # 120
Suisun City, CA 94585
707-718-1416

August 2022

Stockton West, California USGS 7.5' Quadrangle
Township 1 North, Range 6 East

MANAGEMENT SUMMARY

The City of Stockton (the City) proposes to rehabilitate an existing sanitary sewer pipeline located along Mormon Slough within the City limits in San Joaquin County, California (the "Project"). The proposed Project has the potential impact a water of the United States (Mormon Slough) requiring a Section 404 of the Clean Water Act permit from the U.S. Army Corps of Engineers. Consequently, the Project is considered a federal undertaking and as such is subject to Section 106 of the National Historic Preservation Act (Section 106). The Project is also subject to the cultural resources provisions of the California Environmental Quality Act (CEQA). To facilitate the Section 106/CEQA compliance process, Solano Archaeological Services (SAS) was contracted by Basecamp Environmental, Inc. to complete background research, an archaeological survey, and a Native American community outreach program to document and evaluate cultural resources that might be located within the Project's Area of Potential Effects (APE).

Background research was conducted through the Central California Information Center (CCIC) of the California Historical Resources Information System. This archival research indicated that no prehistoric or historic-era cultural resources have been documented in the APE but that 15 primarily built environment resources had been recorded within a 1/2-mile search area. In addition, the CCIC noted that three cultural resources investigations have incorporated at least a portion of current Project APE. Additional archival research demonstrated that a significant portion of the linear APE is situated within and immediately adjacent to the channel of a natural slough (Mormon Slough) - a potentially sensitive context for prehistoric remains. An intensive field survey of the APE did not identify any prehistoric or historic-era sites, features, or artifacts. A Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) indicated that no documented Native American cultural properties were known to be present within or near the APE. One of the Native American community representatives contacted by SAS expressed concerns about the Project's potential to affect presently unrecorded sites or human interments and recommended archaeological monitoring. However, given the lack of documented cultural resources within and near the APE, and a low-moderate level of archaeological sensitivity, SAS recommends a finding of *no effect on historic properties* and *no impacts on historical resources* for the proposed Project.

Information contained in this document is subject to Section 304 of the NHPA (Public Law 89-665), which allows a federal agency official to withhold sensitive information about the location, character, or ownership of a historical resource from public disclosure when it is determined that disclosure may cause a significant invasion of privacy, risk harm to a historical resource, or impede the use of a traditional religious site by practitioners.

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FIGURES

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APPENDICES

1.0 Introduction

This document presents the findings of a cultural resources inventory, background research, and Native American community outreach for the Mormon Slough Sanitary Sewer Rehabilitation Project (the Project) proposed by the City of Stockton. The Project's Area of Potential Effects (APE) is located within the City of Stockton (the City), San Joaquin County, California (Figures 1–2). All aspects of this cultural resources investigation were conducted or supervised by Jason Coleman, M.A., RPA, and Brian Ludwig, Ph.D., of Solano Archaeological Services (SAS) (Appendix A).

1.1 Project Description

The proposed Project consists of the rehabilitation of approximately 2,165 feet (ft.) of existing 24-inch (in.)-diameter cast concrete sanitary sewer pipeline along Mormon Slough between Sierra Nevada Street and Bieghle Avenue in east central Stockton (Figure 3). The existing sewer line is deteriorating and/or has the potential for structural failure. The Project proposes to replace the pipeline along a largely adjacent alignment which was slightly revised in 2022 to include an additional 370 ft. of alignment to the north along Sierra Nevada Street (St.) between East Anderson St., and East Worth St. (see Appendix B).

1.2 Project Location and Area of Potential Effects

The Project APE is located within and immediately adjacent to the bed of Mormon Slough in a heavily developed area of the City and encompasses and area of approximately 2.74 acres (ac.) (Figure 3). The APE is situated in Township 1 North, Range 6 East, Section 12 (projected) in the Campo De Los Franceses land grant on the *Stockton West, California* U.S. Geological Service (USGS) 7.5' topographic quadrangle map. The vertical APE would not extend below approximately 8 ft. below the present-day ground surface for the installation of the new line and the construction of one new maintenance hole at the eastern end of the APE. The APE has been established to encompass the maximum limits of potential ground-disturbing activities that would reasonably be expected from the proposed project. These would include but not limited to, all existing parcels and rights-of-way, potential access routes, grading, trenching, and equipment staging and laydown areas.

1.3 Regulatory Context

The proposed Project has the potential to affect a water of the US (Mormon Slough), would require a Section 404 of the Clean Water Act permit from the U.S. Army Corps of Engineers (Corps), and as such is considered a federal undertaking. Consequently, the proposed Project is subject to Section 106 of the National Historic Preservation Act (NHPA or "Section 106"). The Project is also subject to the cultural resources provisions of the California Environmental Quality Act (CEQA).

1.3.1 Section 106 of the National Historic Preservation Act

Section 106, as amended, and its implementing regulations found at 36 CFR Part 800, require Federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting actions. The significance of the resources must be evaluated using established criteria outlined at 36 CFR 60.4, as described below. If a resource is determined to be a *historic property*, Section 106 of the NHPA requires that effects of the undertaking on the resource be determined. A historic property is defined as:

> …any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion in the National Register of Historic Places, including artifacts, records, and material remains related to such a property… (NHPA Sec. 301[5])

Section 106 prescribes specific criteria for determining whether an undertaking would adversely affect a historic property, as defined in 36 CFR 800.5. If it is determined that a historic property will be adversely affected by implementation of a proposed action, prudent and feasible measures to avoid or reduce adverse

effects must be taken. The State Historic Preservation Officer must be provided an opportunity to review and comment on these measures prior to implementation of the proposed action.

1.3.2 National Register of Historic Places

The eligibility of a resource for listing on the National Register of Historic Places (NRHP) is determined by evaluating the resource using criteria defined in 36 CFR 60.4 as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history;
> B. That are associated with the lives of persons significant in our past;
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
> D. That has yielded, or may be likely to yield, information important to prehistory or history.

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing on the NRHP. In addition to meeting at least one of the criteria outlined above, the property must also retain enough integrity to enable it to convey its historic significance. The NRHP recognizes seven aspects or qualities that, in various combinations, define integrity. These seven elements of integrity are location, design, setting, materials, workmanship, feeling, and association. To retain integrity a property will always possess several, and usually most, of these aspects.

While most historic buildings and many historic archaeological properties are significant because of their association with important events, people, or styles (criteria A, B, and C), the significance of most prehistoric and historic-period archaeological properties is usually assessed under Criterion D. This criterion stresses the importance of the information contained in an archaeological site, rather than its intrinsic value as a surviving example of a type or its historical association with an important person or event. It places importance not on physical appearance, but rather on information potential.

1.3.3 California Environmental Quality Act

The management of cultural resources within California is guided in large part by the provisions of CEQA. The significance of cultural resources per CEQA guidelines is an important consideration in terms of their management. Public agencies are required to avoid project-related impacts to historic and archaeological resources, particularly those that meet the criteria of significance outlined in the CEQA criteria. When impacts cannot be avoided, their effects can be mitigated, through application of one or more of the following:

- Avoidance during construction phases
- Incorporation of sites into open space
- Capping resources with chemically stable fill
- Deeding a site into a permanent conservation easement
- Data recovery, archival research, and/or photo documentation

Section 15064.5 of the CEQA Guidelines defines a *historical resource* as a cultural resource that is (1) listed on, or determined to be eligible by the State Historical Resources Commission for listing on, the California Register of Historical Resources (CRHR); (2) listed in a local register of cultural resources or as a significant resource in a historical resource survey; or (3) considered to be “historically significant” by a

lead agency as supported by substantial evidence in the record. Generally, a cultural resource shall be considered by the lead agency to be "historically significant" if it meets any of the following criteria for listing on the CRHR:

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

CEQA guidelines also require consideration of unique archaeological resources (Section 15064.5). As used in Public Resource Code (Section 21083.2), a unique archaeological resource means an archaeological 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 meets any of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition to meeting one or more of the above criteria, historical resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling and association.

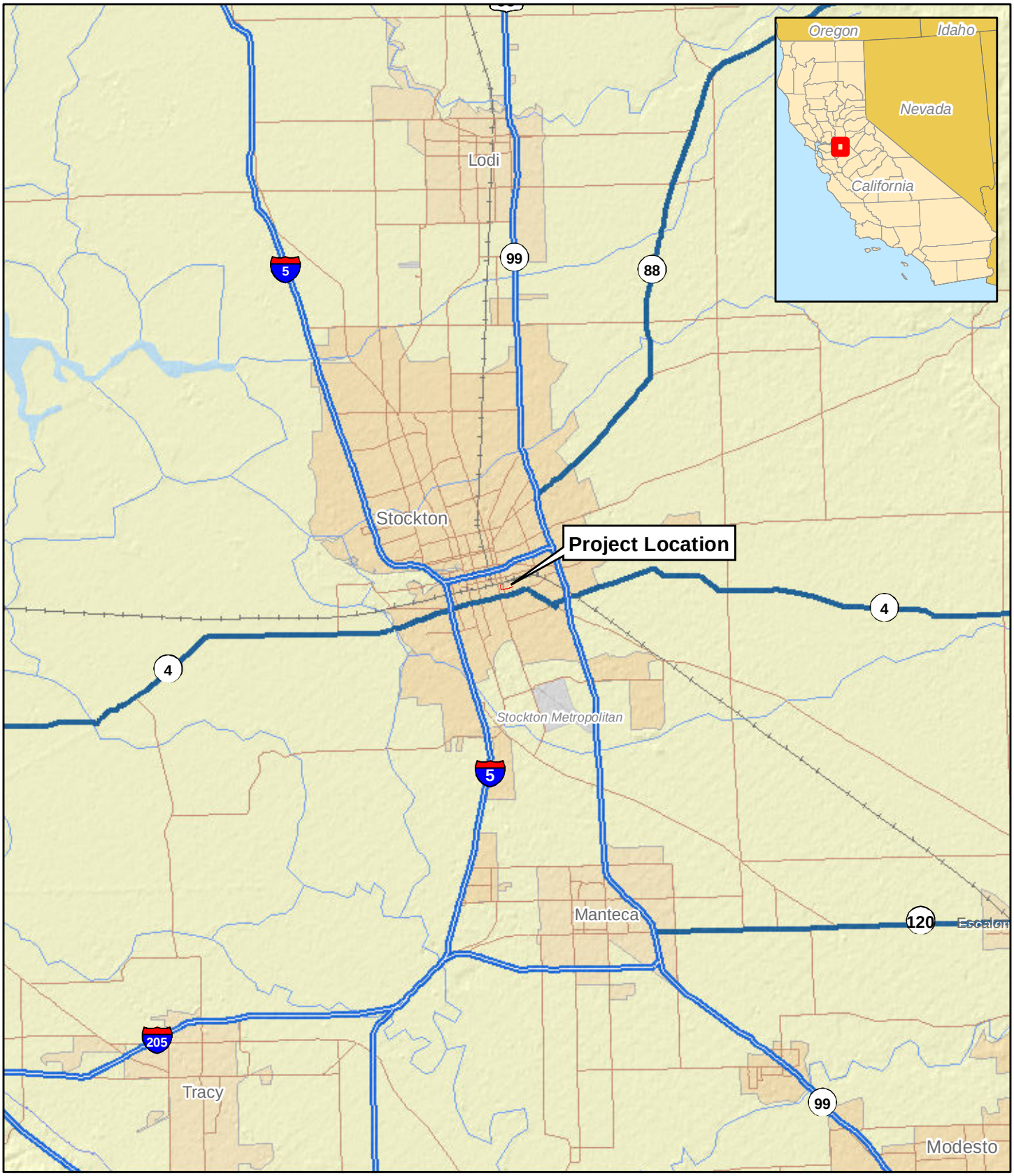

Figure1. Project Vicinity Map.

Mormon Slough Sewer Rehab Project APE

Sources: *USA Base Map* [layer],*Data and Maps* [CD]. ESRI, 2006.

1:250,000

0 3 Miles

0 6 Kilometers

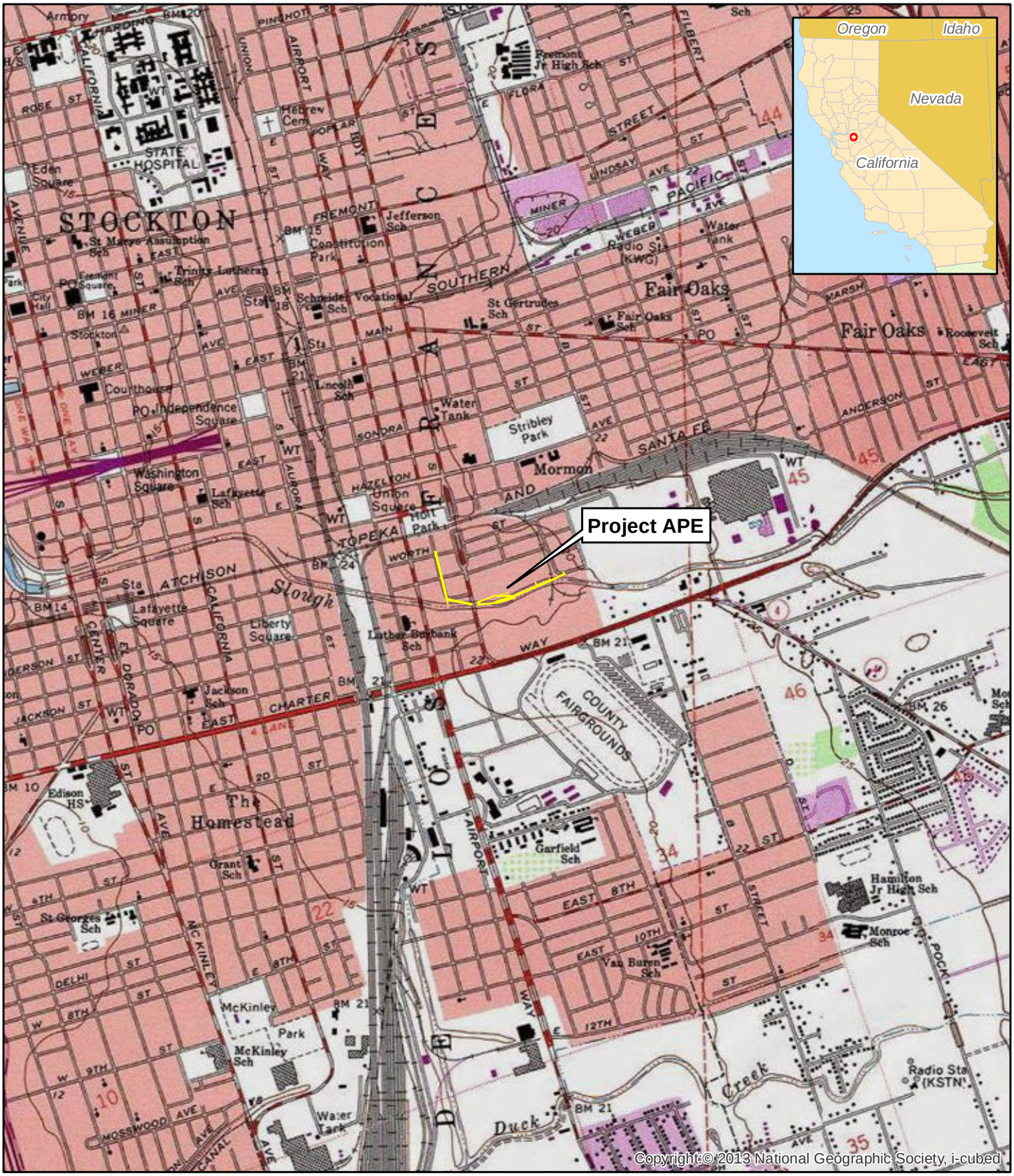

Figure 2. Project Location Map.

Mormon Slough Sewer Rehab Project APE

Campos De Los Franceses Land Grant (Presumed T01N, R06E, Section 12).
Stockton West 7.5' Series Quadrangle, USGS, 1978.

1:24,000

0.5 Miles

1 Kilometers

Figure 3. Project APE Map.

Mormon Slough Sewer Rehab Project APE

1:4,000

0 200 Feet

0 100 Meters

Total Acres: 2.74

2.0 NATURAL AND CULTURAL SETTING

2.1 Natural Environment

The APE is located within California's Central Valley, a north-south trending valley that is bounded by the Sierra Nevada Mountains to the east and south, the Coast Ranges to the west, and the Klamath Mountains to the north. The Central Valley is drained by the Sacramento and San Joaquin Rivers, which join and flow out to the Pacific Ocean through the Delta. The Central Valley is an asymmetric trough approximately 400 miles (mi.) long and 50 mi. wide that is characterized by a relatively flat alluvial plain made up of a deep sequence of sedimentary deposits from Jurassic to recent age; these sediments vary between 3 mi. and 6 mi. in thickness and were derived primarily from erosion of the Sierra Nevada to the east, with lesser material from the Coast Ranges to the west (see Ornduff 1974).

Annual average temperatures in the Stockton area range between 92˚ F and 48˚ F with summer highs often exceeding 100˚ F and winter lows of 30˚ F. Mean annual rainfall in the area is about 17 in., and the majority of this falls from October through March (Western Regional Climate Center 2016). Although this pattern is characteristic of the region in general, there can be marked differences in local climate (and vegetation) as temperatures are dependent on elevation and proximity to seasonal and perennial water sources. Temperatures are lower in depressions and small valleys, particularly during nights when cooler air moves downward, while it remains warmer on slopes and ridge tops in the Coast Ranges to the west or the Sierra Nevada foothills to the east. Because of the earlier ripening of some plant foods on ridge tops, many prehistoric resource gathering, and processing sites tended to be located in these warmer areas, while Native American winter village locations were situated near perennial water sources such as prehistoric Mormon Slough, or the San Joaquin River located just to the west of the APE and the Calaveras River to the north.

The APE and surrounding area is within the climatic band classified as the Lower Sonoran Zone (Storer and Usinger 1970). The climatic pattern is characterized as Mediterranean, with cool, wet winters and hot, dry summers. The dominant vegetative communities in the region consist of prairie grasslands and tule marshes, with some areas of riparian woodland also being present (Kuchler 1977). Prehistorically, Valley oak, cottonwood, sycamore, and willow trees once grew on the verge of streams and rivers. Vegetation tended to be sparse within the prairie grasslands, limited to grasses and flowering herbs. However, a single valley oak could produce 300–500 pounds of acorns each year (Baumhoff 1963) and tule roots could be ground into meal to supplement the abundant faunal resources (Wallace 1978). Faunal species that frequented the prehistoric prairie grasslands and tule marshes included mule deer, tule elk, pronghorn antelope, weasel, river otter, raccoon, and beaver, geese and swans, great blue and black-crowned herons, ibis, cranes, cormorants, bald eagles, badgers, coyotes, skunks, jackrabbits, and cottontail rabbits. Within the waterways, Chinook salmon, steelhead trout, Pacific lamprey, and white sturgeon seasonally joined other fish species indigenous to the area (Moratto 1984).

2.2 Prehistoric Context

California prehistory can be divided into three periods that reflect similar cultural characteristics throughout the state: Paleo-Indian period (ca. 12,000 years before the present [BP] – 8,000 BP), Archaic period (8,000 – 1,500 BP), and Emergent period (1,500 BP – Euro-American contact) (Fredrickson 1973, 1974, 1993). The Archaic is divided further into Lower (8,000 – 5,000 BP), Middle (5,000 – 3,000 BP), and Upper (3,000 BP – 1,500 BP) periods which are defined by dramatic environmental changes and variability in subsistence, settlement, and technological systems seen in the archaeological record.

Human occupation in the Sacramento-San Joaquin Delta region may have occurred as early as 12,000 years ago, but few archaeological sites pre-dating 5,000 years BP have actually been documented in the Delta or the broader Central Valley. It is possible that Holocene alluvial deposits buried many prehistoric sites and the dynamic nature of the Delta and Central Valley waterways have obscured and destroyed earlier sites. For example, Moratto (1984:214) estimates that as much as 10 meters of sediment accumulated along the lower stretch of the Sacramento River drainage system during the last 5,000–6,000 years. One of the few early sites documented in the general region is CA-CCO-637 in eastern Contra Costa County which dates to approximately 8,500 BP and was found in an alluvial fan near present-day Kellogg Creek (Meyer and Rosenthal 1998).

Prehistoric material culture found in central California subsequent to the Paleo-Indian and Lower Archaic periods has been categorized according to "horizons" or "patterns" that define broad technological, economic, social, and ideological elements over long periods of time and large areas. Fredrickson (1973, 1974) defined three regional patterns that are most relevant to the APE, three of which are specific to the prehistory of the APE. Referred to as the Windmiller, Berkeley, and Augustine patterns, each represents a general pattern of resource exploitation and cultural manifestations and occurred between about 4,500 BP and Euro-American contact around the year 1800.

Windmiller Pattern (4,500 - 2,500 BP)

Middle Archaic Windmiller Pattern sites date to as early as 4,500 BP and extend to and as late as 2,500 years ago. Windmiller sites appear to indicate an extensive reliance on plant foods although a wide variety of faunal remains have been noted as well. The presence of fishhooks and probable net and line sinkers along with the remains of sturgeon, salmon, and smaller species, indicate that fishing was an additional and important source of food (Fredrickson 1973; Heizer 1949; Ragir 1972). Items made of baked clay included net sinkers, pipes and manufactured cooking "stones" in an environment where suitable natural cobbles were generally scarce. Ground and polished charmstones, impressions of twined basketry, shell beads, and bone tools also have been found at Windmiller Pattern sites. Some items, such as shell beads, obsidian tools, and quartz crystals, were obtained by trade. Windmiller people appear to have resided in the Central Valley during the winter months but shifted to higher elevations during the summer (Moratto 1984:206). Mortuary practices included the frequent addition of grave goods in the interments and the deceased were buried in cemeteries that were separate from the habitation sites.

Berkeley Pattern (2,500 BP - 1,500 BP)

By around 2,500 BP the archaeological record begins to show changes to more specialized adaptive patterns characteristic of the Berkeley Pattern. Acorns become a significant dietary staple and this shift can be seen in a dramatic increase in the occurrence of mortars and pestles on sites as opposed to manos and metates which were far more common during the Windmiller. Mortars and pestles are better suited to crushing and grinding acorns, whereas manos and metates were used primarily for grinding wild grass grains and seeds (Moratto 1984:209–210). The archaeological record, however, clearly indicates that hunting continued to be an important source of food and useful materials (Fredrickson 1973:125–126). In addition, Berkeley Pattern sites adjacent to Bay and coastal shorelines often include significant shell mounds and middens indicating an intensive use of both fresh and saltwater aquatic resources.

Artifact assemblages and radiocarbon dates from Berkeley Pattern sites suggest the subsistence and technological patterns characteristic of this time may have developed in the San Francisco Bay region and later spread into central California. Moratto (1984:207–211) suggests the pattern may be associated with an expansion of Eastern Miwok populations from the San Francisco Bay area to the Central Valley and into the Sierra foothills.

Augustine Pattern (1,500 BP - historic contact)

The Augustine Pattern is marked by shifts in subsistence and land-use patterns that begin to resemble those noted in ethnographic observations. Tools and cooking implements include shaped mortars and pestles, hopper mortars, bone awls used for producing coiled baskets, and the bow and arrow. A type of pottery, referred to as Cosumnes Brownware, appears in some parts of the Central Valley and have evolved from the baked clay industry so prominent during earlier times.

During this period, increased sedentism, social stratification, and the rise of elaborate ceremonies and social organizations can be seen. Exchange networks expanded and became more complex also developed during this time (see Fredrickson 1973; Moratto 1984). Distinctive artifacts including flanged tubular pipes, harpoons, and Gunther barbed series projectile points are found on these sites. Moratto (1984: 211–214) suggests that these occurrences accompanied by the other notable aspects of the Augustine Pattern may represent a southward expansion of Wintu populations and territory.

2.3 Ethnographic Context

Ethnographically, the Northern Valley Yokuts occupied the APE and vicinity within a larger traditional territory including lands on either side of the San Joaquin River from the Sacramento-San Joaquin Delta to south of Mendota. The Diablo Range probably marked their western boundary (Wallace 1978:462) while the eastern extent would have lain along the Sierra Nevada foothills. Milliken (1997) places the *Yatchicumne* Yokuts group in the area now encompassed by the City of Stockton, and the *Passime* group in the nearby French Camp and Duck Creek Slough areas to the south of the APE.

Occupation of the northern parts of the range by the Yokuts may be fairly recent with linguistic evidence suggesting toward an earlier Miwok occupation. The Yokuts gradually expanded their lands northward and clearly occupied the APE and vicinity during the Spanish colonial period, as evidenced by mixed assemblages of historic-era and prehistoric artifacts on archaeological sites. The late prehistoric Yokuts may have been the largest ethnic group in pre-contact California. They were organized into at least 11 small political units or tribes (Wallace 1978). Each tribe had a population of approximately 300 people, most of who lived within one principal settlement that usually had the same name as the political unit.

In many respects, the Yokuts' lifeways were very similar to that of other Central Valley groups. The hunting of terrestrial game such as tule elk, mule deer, antelope, pronghorn, rabbits, squirrels, and gophers was considered important, but it was subsidiary to collected foods that could be stored year-round. According to Powers in 1877, the typical California Native American diet consisted mainly of acorn, fish, and small seeds (Heizer and Elsasser 1980:83). Nearly 500 plant and animal species were commonly utilized. Subsistence practices of the Miwok were no different, as fresh greens, seeds, and acorn were harvested during their appropriate seasons. Bedrock outcroppings were frequently utilized for creating fixed, non-portable mortars used in grinding nuts and seeds into meal. In locales where bedrock outcroppings were nonexistent, smaller, portable mortars and stone pestles were used. Acorn by itself is not edible due to the bitter tannins inside the nut, but like many other California Native American groups, the Yokuts processed acorn by first grinding the nuts into flour. The acorn flour was then water-processed to leach out the bitter tannins, making the flour usable for making mush or bread (Heizer and Elsasser 1980:91–93). As with the various seeds collected along the Central Valley grasslands (sunflower, clover, bunchgrass, and wild oats to name a few), acorn was stored in baskets to be used during leaner months of the year.

In riparian areas, fishing and the hunting of waterfowl were also utilized to supplement dietary intake. Important delta fish species included salmon, sturgeon, chub, steelhead trout, sucker, Sacramento perch,

Sacramento pikeminnow, hardhead and splittail. Fish were typically caught with the use of a net, hook and line, or harpoons. Ducks and other waterfowl were captured with nets and decoys. In addition to the fish and waterfowl, reeds and tule were also important resources utilized by the Yokuts for creating structure thatching, cordage, canoes and rafts. The roots, pollen, and seeds of the tule were also eaten.

Early in the historic period, the Yokuts were severely impacted by the effects of Euro-American settlement. However, the Yokuts were particularly decimated by disease and warfare and as a result these people were generally not well documented in the ethnographic record (Wallace 1978). Information on the Yokuts' lifeways has been compiled by ethnographers from various sources; primarily military and missionary reports and diaries written during the Spanish and Mexican periods.

Euro-American contact with the Northern Valley Yokuts began with infrequent excursions by Spanish explorers traveling through the Sacramento-San Joaquin Valleys in the late 1700s to early 1800s. Cook (1955) attempted to identify San Joaquin Valley village and tribal groups based on early accounts from Spanish explorers and Mission records. Many Yokuts were lured or captured by missionaries and taken to Mission San Jose or Mission Santa Clara. A probable malaria epidemic in 1833 decimated the indigenous population, killing thousands. The influx of Europeans during the Gold Rush era further reduced the population because of disease and violent encounters with the miners. Though little or no gold at all was found in the Yokuts territory, miners passing through on their way to the rich diggings in the Sierra Nevada foothills resulted in a significant degree of cultural upheaval. Former miners, who had seen the richness of the San Joaquin Valley on their way east to the diggings later returned to settle and farm the former Yokuts lands (Wallace 1978).

Presently, the Nototome/North Valley Yokut Tribe, Inc., represents the Northern Valley Yokuts in the Stockton region. The group is dedicated to the perpetuation of their cultural heritage which involves the preservation, documentation, and interpretation of their past including ethnographic, archaeological, and human remains.

2.4 Historic Context

Following exploration during the Spanish period into parts of the interior San Joaquin Valley beginning in the 1770s, early travelers utilized two major north-south trails through what would become the State of California. Current-day Highway 101 generally follows the El Camino Real ("King's Highway") which connected the Spanish missions and paralleled the coastline between San Diego and Sonoma. The interior El Camino Viejo is the oldest north-south trail that traversed the entire length of the San Joaquin Valley with much of the trail established east of the Coast Range (Hoover et al. 2002). This trail and other roads established the primary overland transportation routes in Alta California that saw heavy use throughout the Mexican Period and into the American Period which began with the conclusion of the Mexican-American War just prior to the California Gold Rush.

The Mexican-American War ended with the 1848 Treaty of Guadalupe Hidalgo, which promised that the property rights of the Mexicans in California would be protected by the U.S. government. However, the U.S. ultimately did not protect the rancho lands from squatters and the government required that the rancheros prove that they owned the land. Under the 1851 California Land Act (9 Stat. 631) the U.S. government set up a three-member Board of Land Commissioners in San Francisco to consider land claims. The rancho owners were required to show papers to prove just what land they owned. Any land not claimed or claims not accepted, became state or public land that could be transferred to new settlers. Many of the rancheros had no papers proving that they owned the land or no evidence of their rancho boundaries. Those who had some proof that they owned the land presented their evidence to the Land

Commission, but it took an average of 17 years before the Commission issued a decision that the applicant could retain ownership (Hoover et al. 2002).

The APE is located in an area once part of the 48,000-ac. Campo De Los Franceses land grant that was awarded to Guillermo Gulnac by the Mexican government in 1843 (Beck and Haase 1978). Gulnac entered into a partnership with Captain C. M. Weber, a recent German immigrant. After emigrating to the United States, Weber stayed briefly in New Orleans before making his way to Sutter's Fort in what is now Sacramento where he became Sutter's overseer and general assistant. After receiving a half interest in the rancho from Gulnac, Weber moved to Stockton in 1847 and later purchased the other half interest. Weber actively encouraged settlement and convinced others to move to the region by offering them land, ultimately laying the groundwork for future and more intensive settlement and economic development (Prouty 1980).

As part of his efforts to encourage settlement on and near his rancho, in 1847 Weber laid out the town of Tuleburg on the south side of the *Laguna*, now known as the Stockton Channel. He also tried his hand at mining, forming the Stockton Mining and Trading Company following the 1848 discovery of gold at Sutter's Mill in El Dorado County. The world-wide accounts of this discovery triggered the Gold Rush which influenced the history of the entire state (established one year later) and the nation. Thousands of settlers and immigrants entered California, headed for the gold fields in the Sierra foothills. Some enterprising individuals recognized the fortunes to be made by supplying the mining industry through farming, ranching, manufacturing, timber harvesting, and the transportation of goods. Weber realized that he could reap larger rewards by focusing on establishing Tuleburg as supply center catering to the Gold Rush miners. The town was re-surveyed, and the name was formally changed to Stockton, in honor of Commodore Robert F. Stockton - a United States Navy commodore, who was a key figure in the capture of California during the Mexican-American War. He was a naval innovator and an early advocate for a propeller-driven, steam-powered navy (Tinkham 1923).

With the Gold Rush, the town grew rapidly, and ships arrived on a regular basis loaded with passengers and cargo mostly bound for the gold fields in the Sierra foothills. Roads were established from Stockton to Sacramento, Mariposa, Tuolumne, and Amador counties and one of the most important of these was Mariposa Road, a segment of which is situated within the APE.

By the winter of 1850, the population of Stockton had increased to 5,000 (Davis-King 1999). As the Gold Rush boom eventually receded, further growth was spurred with the establishment of the railroads, the first of which was the Central Pacific who's locomotive, *Governor Stanford*, arrived in August of 1869. Another prominent line, The San Francisco & San Joaquin Valley Railroad Company, began construction from Stockton to Bakersfield in 1895, is located just to the north, and east of the APE, and is presently operated by the Burlington Northern Santa Fe (Davis-King 1999). Stockton's growth continued throughout the 20th century with the city becoming a rail, water, and highway transportation hub linking the Central Valley's agricultural fields and other industries to national and world markets.

3.0 Native American Consultation

On behalf of the Corp, and the City, SAS contacted the Native American Heritage Commission (NAHC) via an emailed letter on April 16th, 2021 to request a Sacred Lands File (SLF) search and a list of appropriate Native American tribal contacts for the proposed Project (Appendix C). On May 13th, 2021 the NAHC responded that no previously documented cultural properties or locations were known to be present within or near the APE. The NAHC also provided a list of suitable regional Native American community contacts. The individuals listed below were contacted via letter on May 14th requesting any

information they might have on cultural resources in or near the APE and soliciting any concerns they might have with the proposed Project:

- Monica Arellano, Vice Chair - Muwekma Ohlone Indian Tribe
- Katherine Perez, Chair - North Valley Yokuts Tribe
- Timothy Perez - North Valley Yokuts Tribe
- Neil Peyron, Chair - Tule River Indian Tribe
- Joey Garfield, Tribal Archaeologist - Tule Indian River Tribe
- Kerri Vera, Environmental Department - Tule Indian River Tribe
- Dahlton Brown, Director of Administration - Wilton Rancheria
- Jesus Tarango, Chair - Wilton Rancheria
- Steven Hutchason, Tribal Historic Preservation Officer - Wilton Rancheria
- Kenneth Woodrow, Chair - Wuksache Indian Tribe/Eshom Valley Band
- Corrina Gould, Chair - The Confederated Villages of Lisjan

None of the above-listed contacts responded directly to the letter sent on May 14th nor to an email sent on May 19th. On May 18th, 2021, Ms. Kathy Perez of the North Valley Yokuts Tribe called SAS to express general concerns regarding the overall sensitivity of the APE and the potential for unanticipated discoveries since the slough was/is a natural watercourse. SAS also left phone messages for each of the above-listed contacts on May 26th, 2021, but no further information or concerns were conveyed.

In response to the slight change in the APE in 2022, SAS renewed Native American community outreach efforts with new letters and email contacts to the above-listed individuals. SAS mailed new Project information and request letters to the representatives initially contacted in 2021 on July 2nd, 2022, but no responses were forwarded. SAS then emailed each of the contacts on July 27th, 2022, and got a response from Ms. Katherine Perez who again expressed concerns and recommended monitoring of Project ground-disturbing activities. As of this report, no further input has been received but if substantive comments or concerns are provided, they will be included as an addendum to this report.

4.0 RECORD SEARCH AND LITERATURE REVIEW RESULTS

4.1 Information Center Record Search Results

The Central California Information Center (CCIC) of the California Historical Resources Information System provided the results of a record search request to SAS on April 2, 2021 (CCIC File No. 11737L) (Appendix D). This search included a review of the CCIC archives for previously known or recorded cultural resources, studies, and isolates within the APE (which included the 2022 update) and a 1/2-mi. radius. The CCIC search also included, but was not necessarily restricted to, a review of the following sources:

- The *National Register of Historic Places* (Historic Properties Directory, California Office of Historic Preservation)
- The *California Register of Historic Places* (Historic Properties Directory, California Office of Historic Preservation)
- The *California Historical Landmarks* (California Office of Historic Preservation)
- The *California Points of Historical Interest* (California Office of Historic Preservation)
- The *California Inventory of Historic Resources* (California Department of Parks and Recreation).

The CCIC record search indicated that no cultural resources have been documented within the APE but did note the presence of 14 known historic-era sites and features within the 1/2-mi. search area (Table 1). The

CCIC also noted that three cultural resources investigations have incorporated at least a portion of the current APE (Table 2). A total of 18 previous investigations occurred outside the APE but within the search area (see Appendix D).

Table 1. Previously Documented Cultural Resources Within ½-Mile of the APE

Resource No. (P-39-)	Association	Type	Last Documented
000002	Historic era	Southern Pacific Railroad line	Wisely - FWARG 2018
000112	Historic era	Burlington Northern Santa Fe rail line	Stapleton - Parus Consulting 2013
000393	Historic era	U.S. Forest Service Stockton Supply Depot	Supernowicz - USFS 1982
000469	Historic era	WWII internment camp	Okamura - Ethnic Minority Cultural Resources 1980
002388	Historic era	Burbank School	San Joaquin Cty. Superintendent of Public Schools 1991
004266	Historic era	Unidentified building	Walker & Weitze 1979
004267	Historic era	815 S. Airport Way - building	Walker & Weitze 1979
004302	Historic era	947 S. Aurora St. - building	Derivi et al. 1979
004349	Historic era	2000/2024 E. Charter Way - building`	Marvin & Brejla - LSA Assoc. 2002
004350	Historic era	Caltrans D. 10 Maintenance Yard	Kuzak - Caltrans D. 10 2009
004351	Historic era	Caltrans D. 10 Headquarters	Marvin & Brejla - LSA Assoc. 2002
004457	Historic era	Central Cal. Traction Railroad	Pappas & Westwood -ECORP 2011
005142	Historic era	Geiger Manufacturing Inc.	Jacquemain - CRM Tech 2012
005377	Historic era	Station 19 Pump House	Nayyar & Wendt - Michael Brandman Assoc. 2020

Table 2. Previously Conducted Cultural Resources Studies in the APE

Study No. (SJ-)	Author	Title
02219	City of Stockton	Historic Survey Project Agreement, Final Report; Project Period June 1, 1978, to March 31, 1979.
02246	Hemmenau, H - City of Stockton	Completion Report, Historic Survey Project Agreement No. 36-09-006, Stockton, California; Project Period April 1, 1979, to March 31, 1980.
02247	Rapp, L. - City of Stockton	Stockton Historic Resource Inventory II: Analysis Report, June 1980.

4.2 Additional Archival Research

In order to ascertain patterns of land ownership and use within the APE and identify potential undocumented subsurface cultural deposits and sensitive landforms, SAS conducted additional archival research focused on historic mapping and land transfer records. This research consisted of reviews of the Bureau of Land Management's General Land Office (GLO) archives including patent records, and plat maps, historical USGS topographic quadrangle maps, and other archival sources.

Since the GLO did not survey previously established rancho lands, no sections were delineated nor were landscape features or developments generally noted on the portions of plat maps that encompassed the ranchos. Consequently, no features of any kind are noted in the area encompassing Campo De Los Franceses on the earliest available (1879) plat map. The Rancho Campo De Los Franceses, awarded by the Mexican government, had to go through a review process by the American government following the 1848 Treaty of Guadelupe Hidalgo. The results of this review can be seen in the formal 1861 patenting of the original rancho lands to Guillermo Gulnac, and Charles Weber under the 1851 California Land Act (Bureau of Land Management 2020).

An examination of historic USGS mapping indicates that the alignment of Mormon Slough likely has not changed in any significant way since at least the earliest topographic quadrangle which was printed in 1913. By 1913, most of the present-day street grid was already in place although only sporadic buildings were noted adjacent to the slough. By the 1950s, most of the areas adjacent to the slough appear to have been developed but some open space areas remained as late as the late 1960s according to aerial photography.

Sanborn Fire Insurance maps (Sanborn Perris Map Co. 1895) shows the APE and immediate vicinity and while the street grid may have been extended to the APE by this time, no developments of any kind are depicted in or adjacent to Mormon Slough. In general, it appears that the City of Stockton had yet to fully expand into this area during the late 19th century but by 1913, the USGS mapping depicts the street grid and initial building construction in the immediate vicinity of the APE.

5.0 FIELD METHODS and SURVEY FINDINGS

On April 9th, 2021, SAS archaeologists conducted an intensive survey of the APE where Project ground disturbing activities would occur. Although surface visibility within much of the unpaved portion APE was excellent, the entire APE has clearly been heavily disturbed by past construction activities, existing commercial and industrial development, and dense concentrations of transient camps and present-day trash deposits. No prehistoric or historic-era archaeological sites, features, or artifacts were noted within or adjacent to the APE.

6.0 ARCHAEOLOGICAL SENSITIVITY ASSESSMENT

Archival research has demonstrated that the APE and immediately adjacent properties lie in an area that has been subject to historic-era developments since at least the early years of the 20th century. Historic mapping suggests that little in the way of residential or commercial development occurred prior to this time and it is unlikely that earlier, intact, and potentially significant historic-era sites, features, or artifacts would be present in surface or subsurface contexts within the APE. Consequently, SAS recommends a low level of archaeological sensitivity for historic-era resources for the APE.

Historic mapping suggests that the present-day channel of Mormon Slough remains largely unchanged from its natural alignment. The slough was a natural waterway with immediate access to the San Joaquin River and ultimately the resource-rich Sacramento-San Joaquin Delta. Such contexts are well documented

in the Central Valley as being highly sensitive for containing significant prehistoric sites. Although this might suggest a high level of sensitivity for prehistoric resources, the severe disturbances visible in and adjacent to the APE suggest that any formerly intact early Native American sites that may have been situated within or near the APE have likely been destroyed or at the very least, heavily disturbed. As a result, SAS recommends the APE as retaining only a low-moderate level of sensitivity for exhibiting traces of early Native American habitation, activities, and human interments.

7.0 RECOMMENDATIONS

In the event that presently undocumented buried archaeological deposits are encountered during any Project-associated construction activity, work must cease within a 50-ft. radius of the discovery. A qualified archaeologist must be retained to document the discovery, assess its significance, and recommend treatment per Section 106 and CEQA guidance.

To ensure that discoveries of Native American human remains and/or associated funerary objects are treated in accordance with the California Public Resources Code PRC Section 15064.5[e]), PRC Section 5097.98, and the California Health and Safety Code (CHSC) (Section 7050.5), SAS recommends that a qualified Native American monitor be present on-site during all Project ground-disturbing activities per input from the Native American community. In the event that human remains, or any associated funerary artifacts are discovered during Project construction, all ground-disturbing work within 50 ft. of the discovery shall cease and, in accordance with requirements of the PRC and the CHSC, the San Joaquin County Sheriff/Coroner shall be contacted immediately. If the remains are deemed to be of Native American origin, the Sheriff/Croner will notify the NAHC, which will in turn appoint a Most Likely Descendent (MLD) to act as a tribal representative. The MLD will work with the Corps, the City, and a qualified archaeologist to develop a plan for the proper treatment of the human remains and any associated funerary objects. Ground-disturbing activities shall not resume within 50 ft. of the discovery until treatment has been completed.

8.0 REFERENCES

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APPENDIX A

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KEY PERSONNEL RESUMES

Jason A. Coleman, M.A., R.P.A.

jason@solanoarchaeology.com

Highlights:

- Founder of Solano Archaeological Services
- Surveyed more than 60,000 acres throughout California
- Field directed numerous large-scale data recovery projects
- Active archaeologist for over 20 years
- Conducted professional projects in 5 different states
- Proficient in CEQA and Section 106 compliance
- Six years college teaching experience (anthropology).

Education:

1996 M.A., Anthropology, California State University, Hayward.
1992 B.A., Anthropology, University of California, Berkeley, with Honors.

Certifications:

Registered Professional Archaeologist (ID 15338)

Professional Affiliation:

- Society for California Archaeology
- Archaeological Institute of America

Professional Archaeological Experience:

2005-present: Solano Archaeological Services (SAS), Suisun City, California.
Mr. Coleman founded SAS in March of 2005, and maintains the company by overseeing administrative duties including accounting, marketing, permitting, and licensing. Mr. Coleman serves as the main proposal and report writer, and is the lead principal investigator on most projects.

Projects conducted as SAS Owner:

Archaeological Monitoring for the Menlo Park Project, San Mateo County, California (2013-present). Ongoing construction monitoring for five separate developments on the Veteran Affairs (VA) Palo Alto Health Care System at the Menlo Park Division. Projects include the Storm Drain Phase 2 Project, the Entranceway and Parking Lots Upgrade Phase 1A Project, the Seismic Correction of Building 323 and Infrastructure Enhancements Project, Building 205 Demolition, and the Building 361 Community Living Center Clinic Project. The contract involves coordination efforts with the VA, contractor superintendents, and Native American Amah Mutson monitors. As part of the field preparation, all field personnel underwent OSHA 10 safety training.
Position: Principal Investigator, Field Director
Client: Veteran Affairs

Archaeological Identification Surveys for the Farm Services Agency, California-wide (2015-2016). SAS, in tandem with GrassRoots Environmental were awarded a 5-year performance-based blanket purchase agreement with the U.S. Department of Agriculture – Farm Service Agency (USDA-FSA) to conduct a series of cultural resource studies as part of the Emergency Conservation Program (ECP). The ECP helps farmers and ranchers to put in place methods for water conservation and additional water supply during times of severe drought. The ECP provides cost-sharing funds for the construction of these new watering facilities, thus triggering Section 106 regulatory setting. As part of the 2014 Farm Bill passed by the U.S. Congress, the USDA-FSA is using the ECP to assist California farmers in developing permanent water sources and infrastructure (including wells, troughs, tanks, and pipelines) for livestock

during the current drought. These water development projects involve a small-scale footprint (typically from three to six well sites on 1-5 acres) located on private grazing lands. Twenty-four cultural resources inventories have already been completed in Plumas, Sierra, Yuba, Yolo, San Benito, Kern, and Siskiyou Counties as part of the ECP in 2015.
Position: Principal Investigator and Field Director
Client: GrassRoots Environmental prime contract holder

Lower Putah Creek Restoration Project Cultural Resources Inventory and Evaluation Report, Yolo County, California (2015). Located within the Yolo Bypass Wildlife Area (YBWA), a 16,800-acre wildlife preserve managed by California Department of Fish and Wildlife (CDFW), the project proposed to restore ecological functions and enhance fish passage in Lower Putah Creek, from the Putah Diversion Dam through the YBWA. Directed by the Yolo Basin Foundation (YBF) and CDFW, the proposed project would create a new 5.6-mile long Lower Putah Creek channel through the YBWA that would connect through and enhance an existing restored tidal channel on the YBWA, and provide a new connection with the Toe Drain, downstream of the Lisbon Weir. Due to Section 404 permitting with the USACE, the project involved CEQA and Section 106 regulatory settings. SAS conducted a records search at the Northwest Information Center, and extensive research of the project area. Consultation with the Native American community also took place. During survey two historic-era resources were identified, including the grade of the Sacramento Norther Railway and a 220 kilovolt (kv) electrical transmission line. Both resources were fully recorded, researched, and ultimately recommended ineligible for NRHP listing. SAS also prepared an EIR section for the client.
Position: Principal Investigator, Field Director
Client: Richard Grassetti Consulting

Cameron Hills Project, El Dorado County, California (2015). On behalf of Sycamore Environmental, a NEPA-level cultural resources study of a 20-acre parcel was conducted near the town of Shingle Springs. MCP Properties, LLC was proposing to construct a 41-unit residential subdivision of single-family homes at this location. The construction was to include the installation of utilities, a storm water detention basin, and a road network. As the project qualified under the USACE as a Nationwide 14 Linear Transportation Project, the project required the submission of a Section 404 permit to the USACE and compliance with Section 106 of the NHPA. Extensive Native American consultation was conducted, and a reconnaissance survey yielded no cultural resources on the parcel. The report was reviewed and accepted by the USACE and the project was completed successfully on time.
Position: Principal Investigator, Field Director
Client: Sycamore Environmental

Hope Valley Meadow Restoration Project, Alpine County, California (2015). Conducted a NEPA-level cultural study of a 7-acre parcel in Alpine County as part of a wetland restoration effort. American Rivers, a national non-profit conservation organization dedicated to protecting and restoring the rivers of the U.S., proposed to restore meadowlands along the West Fork of the Carson River in Hope Valley south of South Lake Tahoe. The purpose of the Project was to stabilize 130 feet of high, eroding bank along the stream channel on California Department of Fish and Wildlife land. The project was completed on time with no cultural resources discovered, and the report was successfully reviewed and accepted by the U.S. Army Corps of Engineers (USACE).
Position: Principal Investigator, Field Director
Client: American Rivers

Superior Self Storage Project, City of Vacaville, Solano County, California (2015). Conducted a CEQA-level cultural resources inventory on a 2.5-acre lot for the proposed construction of a 45,701 square foot single-story indoor public storage facility located at the southwest intersection of Piper Drive and E. Monte Vista Avenue. The Native American Heritage Commission Sacred Land review, Northwest Information Center records search, and reconnaissance survey were all negative for cultural resources. At the request of the client, the project was successfully expedited within three weeks to ensure deadlines were met with Solano County and the City of Vacaville planning departments.
Position: Principal Investigator, Field Director
Client: Sycamore Environmental

Brian Ludwig, Ph.D, R.P.A.

Brian@solanoarchaeology.com

Highlights

- Principal Investigator - Solano Archaeological Services
- Over 35 years in cultural resources management
- Managed hundreds of projects – US east and west coast
- Proficient in CEQA, NEPA, and Section 106 compliance
- Prehistoric and historic-era material culture analysis
- Experienced agency, stakeholder, Native American consultation

Education

- 1999 **Ph.D., Anthropology -** Rutgers University
- 1992 **M.A., Anthropology -** Rutgers University
- 1986 **B.A., Anthropology -** Montclair State University

Certifications

- Registered Professional Archaeologists
- BLM Statewide Prehistoric and Historic Archaeology Principal Investigator:
  - ✓ California
  - ✓ Nevada
  - ✓ Washington
  - ✓ Oregon
  - ✓ U.S. Forest Service Region 2

Professional Affiliations

- Society for California Archaeology
- Society of American Military Engineers
- Association of Environmental Professionals

Representative Project Experience

Fort Hunter Liggett/Parks Reserve Forces Training Area Environmental Technical Support – Monterey, and Alameda Counties, California

Dr. Ludwig managed all aspects of this project for the first and second option years of a five-year contract to provide environmental services on-base at FHL/PRFTA. Dr. Ludwig's responsibilities included management of multiple staff on both bases, regular coordination with environmental management staff at both facilities, the U.S. Army Corps of Engineers, and teaming partners to ensure facility compliance with federal, state, and local environmental regulations for a wide range of regulatory statutes related to air quality, hazardous waste management and disposal, and water quality.

Natomas Levee Improvement Program EIR, EIS, and EIR/EIS - Sacramento, California

Dr. Ludwig served as a senior archaeologist for the environmental compliance effort for SAFCA's program of flood control improvements to provide the Sacramento metropolitan area with a "200-year" level of protection. The cultural resources studies contributed to a program-level environmental impact report (EIR) on funding mechanisms for comprehensive flood control improvements for the Sacramento area that documents the potential environmental impacts of a wide range of regional flood control strategies and related activities, including Folsom Dam physical and operational modifications; construction of a new bridge at Folsom; American River floodplain habitat enhancements; implementation

of seepage, and erosion remediation on Sacramento River, American River, and Natomas Cross Canal levees.

Pacheco State Park General Plan and EIR - Merced and Santa Clara Counties, California

Dr. Ludwig conducted and managed all aspects of the cultural resources investigation for this EIR. Pacheco State Park is a recent addition to the State Park system, opened to the public in 1997. The Park is characterized by old ranch roads through plant communities of Oak and Blue Oak Woodland, Grassland Chaparral and wetlands. The General Plan was the first comprehensive inventory and analysis of natural, cultural, recreational and operational resources with the goal of setting a vision for future planning and management. It serves as the primary management document for a State Park unit, defining broad use classifications, visitor use opportunities, natural resources management and restoration policies, cultural resources management programs, interpretation themes, and operations and maintenance policies.

Dos Pueblos Ranch CRHR Evaluation Project - Santa Barbara, California

Dr. Ludwig completed a historic landscape inventory and California Register of Historical Resources (CRHR) evaluation of the historically diverse Dos Pueblos Ranch property located in Goleta, Santa Barbara County. Numerous sites, features, buildings, and artifacts remain as visible reminders to various occupation periods and historical events that have taken place on the Dos Pueblos Ranch property for more than 200 years. The results of the cultural landscape study showed that the Dos Pueblos Ranch property is a good surviving example of a rural historic landscape that reflects the day-to-day occupational activities of a theme important to the economic development of southern California.

Feather and Bear Rivers Levee Setback Project - Yuba County, California

Dr. Ludwig led the cultural resources team in preparing a Land Acquisition and Management Plan (LAMP) addressing options for the treatment of lands within a levee setback area on the Bear River at the confluence with the Feather River and prepared an environmental impact report (EIR) on the levee setback, a key element of the Yuba-Feather Supplemental Flood Control Project. In response to the discovery of prehistoric archaeological remains and artifacts at two sites in the construction footprint, Dr. Ludwig directed archaeological site testing and reporting, including recovery and preservation of burials; coordinated with the pertinent Native American representatives, local authorities, and USACE archaeologists; used a geomorphic model as a predictor of where there is potential for the presence of subsurface archaeological deposits within the footprint of the setback levee; and facilitated discussions of treatment of the discovery sites.

Feather River Levee Repair Project EIR and EIS - Yuba County, California

Dr. Ludwig managed the cultural resources component of this project for a separate EIR and EIS on the Feather River Levee Repair Project, an element of the Yuba-Feather Supplemental Flood Control Project. The project increased flood protection in the Reclamation District (RD) 784 area of Yuba County. The project also addressed identified deficiencies in the Feather River levee and made related improvements to the Yuba River levee near its confluence with the Feather River. Key issues addressed in the EIR included flood control, impacts to upstream and downstream flood stage elevations, endangered species (e.g., giant garter snake and valley elderberry longhorn beetle), and potential impacts to known cultural resources sites. Permitting for the project included assisting TRLIA in preparing documentation required for USACE permission for alteration of the federal levee system under Sec. 408 of the Rivers and Harbors Act and preparation of NEPA documentation to support Corps project approvals.

APPENDIX B

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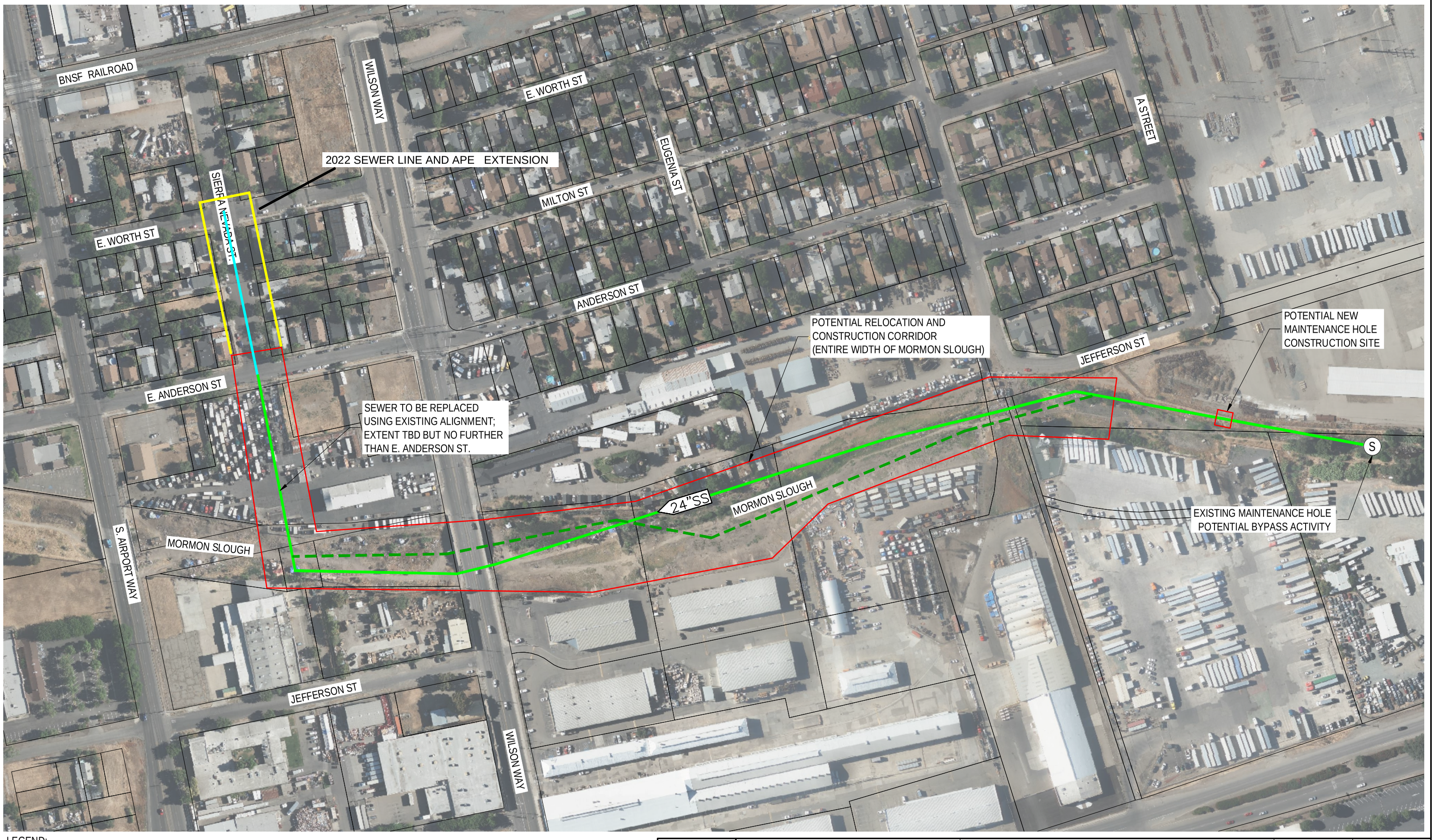
PROJECT ALIGNMENTS MAP



LEGEND:

- EXISTING SEWER ALIGNMENT
- PROPOSED NEW SEWER ROUTE
- POTENTIAL RELOCATION & CONSTRUCTION CORRIDOR (ENTIRE WIDTH OF MORMON SLOUGH)

NORTH ORIENTATION

KJELDSEN SINNOCK NEUDECK
CIVIL ENGINEERS & LAND SURVEYORS
www.ksninc.com
711 N. Pershing Avenue
Stockton, CA 95203
209-946-0268
1550 Harbor Blvd., Suite 212
West Sacramento, CA 95691
916-403-5900

CITY OF STOCKTON MORMON SLOUGH SANITARY SEWER REHABILITATION PROJECT POTENTIAL CONST. CORRIDOR/NEW ROUTE & EXISTING SEWER ALIGNMENT

DRAWING SCALE: 1" = 100'

ORIGINAL DRAWING SCALE: 0 ½" 1"

EXHIBIT NO. A

PAGE NO. 1 OF 1

FILE SPEC: P:\2406_COS-Mormon_Slough_SS_Rehab\0010_Mor_SS-Rehab\08_Civil\400_Plans\020_CAD\Exhibits\210420_Alignment Exhibit.dwg
PLOT DATE: Apr 20, 2021 - 10:18am

APPENDIX C

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NATIVE AMERICAN COMMUNITY OUTREACH CORRESPONDENCE

131 Sunset Avenue, Suite E # 120
Suisun, CA 94585-2064

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

April 16, 2021

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

To Whom It May Concern:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.21-acre (0.5-mile corridor) Area of Potential Effect (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). The Project is subject to the provisions of the California Environmental Quality Act (CEQA), and due to U.S. Army Corps of Engineers permitting requirements, Section 106 of the National Historic Preservation Act (Section 106) is also applicable. The APE is located in Miner Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached *Stockton West, California* USGS 7.5' topographic quadrangle map.

The cultural investigation will include an intensive survey and we would like to request a Sacred Lands File (SLF) review for any known but unrecorded cultural resources or sensitive properties within or near the APE. If you could also please provide a list of appropriate Native American individuals/organizations that may have knowledge of cultural resources in the vicinity, we would greatly appreciate it. Please be aware that this SLF review request and Section 106/CEQA outreach effort to local tribal representatives is for planning purposes only, and is not part of any SB 18 or AB 52 consultation effort.

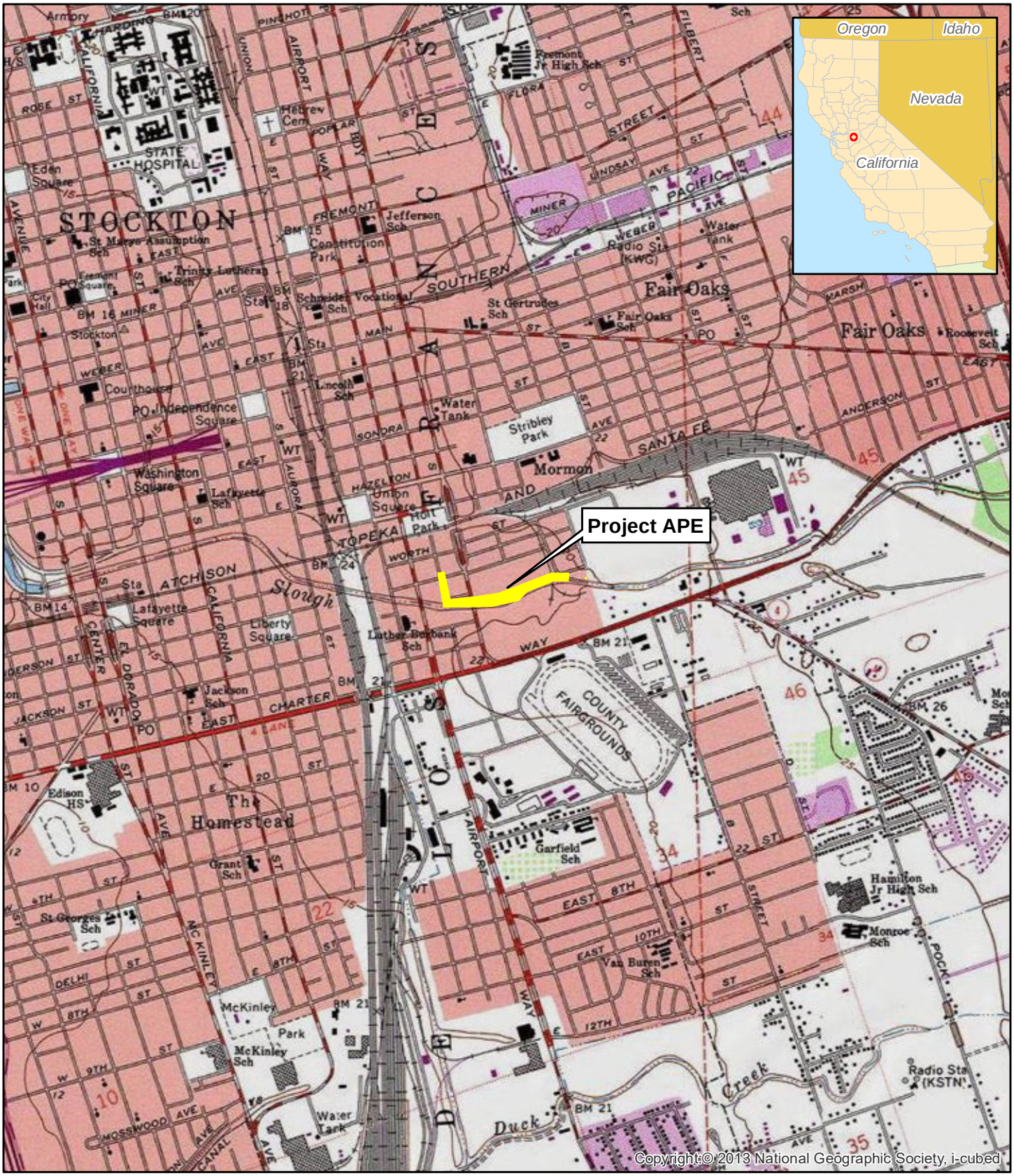
Please email results back to brian@solanoarchaeology.com**.**

If you have any questions, feel free to contact me by email or via phone at 530-417-7007.

Regards,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. USGS topographic map



Project Location Map.

Mormon Slough Sewer Rehab Project APE

Campos De Los Franceses Land Grant (Presumed T01N, R06E, Section 12).
Stockton West 7.5' Series Quadrangle, USGS, 1978.

1:24,000

0.5 Miles

1 Kilometers

SAS SOLANO ARCHAEOLOGICAL SERVICES

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

May 13, 2021

Brian Ludwig

Solano Archeological Services

Via Email to:brian@solanoarchaeology.com

Re: Mormon Slough Sewer Rehabilitation Project, San Joaquin County

Dear Mr. Ludwig:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,

Nancy Gonzalez-Lopez
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
San Joaquin County
5/13/2021

Muwekma Ohlone Indian Tribe of the SF Bay Area
Monica Arellano, Vice Chairwoman
20885 Redwood Road, Suite 232 Costanoan
Castro Valley, CA, 94546
Phone: (408) 205 - 9714
marellano@muwekma.org

North Valley Yokuts Tribe
Katherine Perez, Chairperson
P.O. Box 717 Costanoan
Linden, CA, 95236 Northern Valley
Phone: (209) 887 - 3415 Yokut
canutes@verizon.net

North Valley Yokuts Tribe
Timothy Perez,
P.O. Box 717 Costanoan
Linden, CA, 95236 Northern Valley
Phone: (209) 662 - 2788 Yokut
huskanam@gmail.com

Tule River Indian Tribe
Neil Peyron, Chairperson
P.O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 781 - 4271
Fax: (559) 781-4610
neil.peyron@tulerivertribe-nsn.gov

Tule River Indian Tribe
Joey Garfield, Tribal Archaeologist
P. O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
joey.garfield@tulerivertribe-nsn.gov

Tule River Indian Tribe
Kerri Vera, Environmental Department
P. O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
kerri.vera@tulerivertribe-nsn.gov

Wilton Rancheria
Dahlton Brown, Director of Administration
9728 Kent Street Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
dbrown@wiltonrancheria-nsn.gov

Wilton Rancheria
Jesus Tarango, Chairperson
9728 Kent Street Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 683-6015
jtarango@wiltonrancheria-nsn.gov

Wilton Rancheria
Steven Hutchason, THPO
9728 Kent Street Miwok
Elk Grove, CA, 95624
Phone: (916) 683 - 6000
Fax: (916) 863-6015
shutchason@wiltonrancheria-nsn.gov

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. Foothill Yokut
Salinas, CA, 93906 Mono
Phone: (831) 443 - 9702
kwood8934@aol.com

The Confederated Villages of Lisjan
Corrina Gould, Chairperson
10926 Edes Avenue Bay Miwok
Oakland, CA, 94603 Ohlone
Phone: (510) 575 - 8408 Delta Yokut
cvltribe@gmail.com

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

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Mormon Slough Sewer Rehabilitation Project, San Joaquin County.

P.O. Box 367
Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

July 6, 2021

Corrina Gould
The Confederated Villages of Lisjan
10926 Edes Ave.
Oakland, CA 94603

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Ms. Gould:

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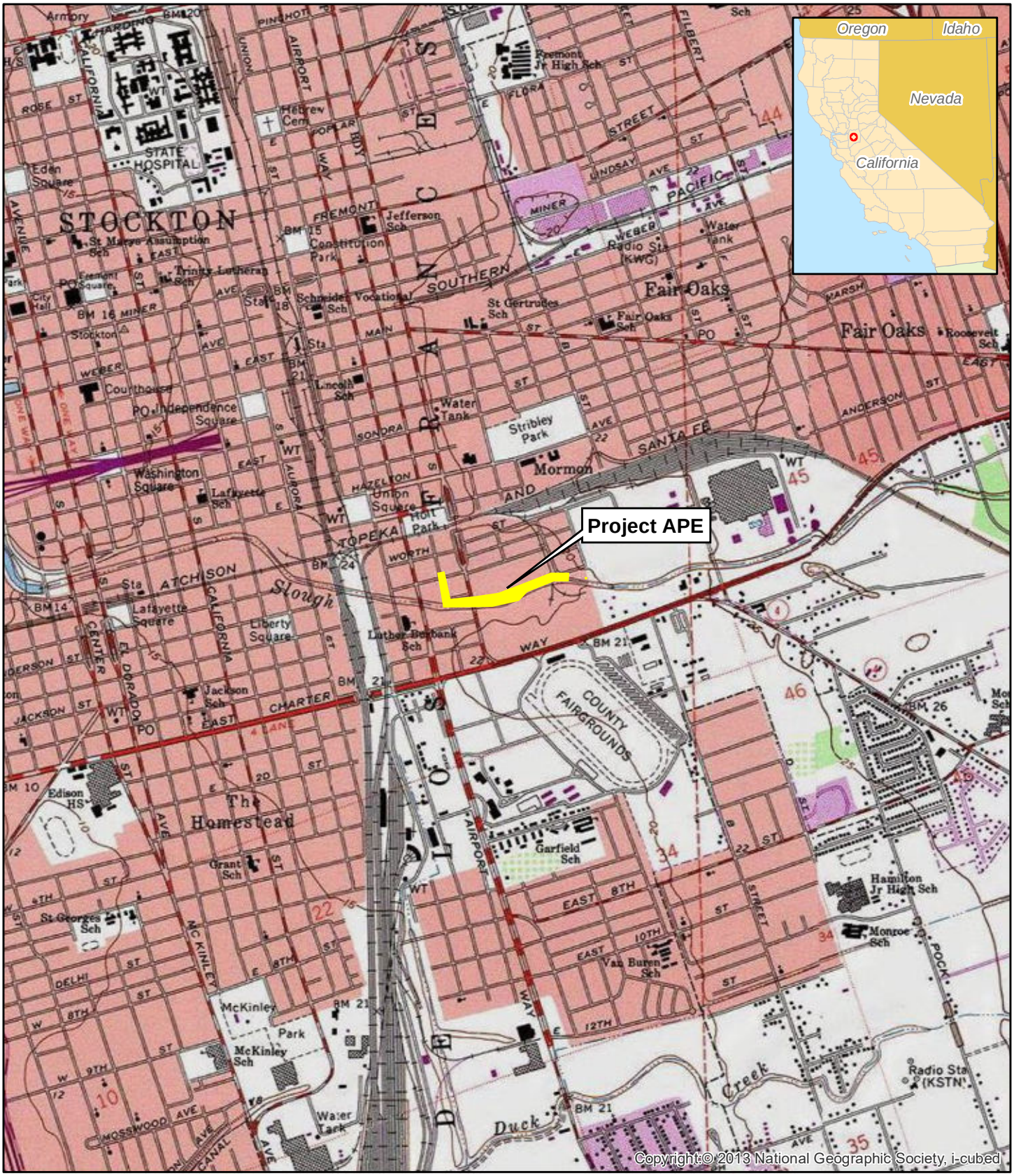
Sincerely,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map



Project Location Map

Mormon Slough Sewer Rehab Project APE

Campos De Los Franceses Land Grant (Presumed T01N, R06E, Section 12).
Stockton West 7.5' Series Quadrangle, USGS, 1978.

1:24,000

0.5 Miles

1 Kilometers

SAS

P.O. Box 367
Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

July 6, 2021

Dahlton Brown
Wilton Rancheria
9728 Kent St.
Elk Grove, CA 95624

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Brown:

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July 6, 2021

Jesus Tarango
Wilton Rancheria
9728 Kent St.
Elk Grove, CA 95624

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

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July 6, 2021

Joey Garfield
Tule River Indian Tribe
P.O. Box 589
Porterville, CA 93258

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Garfield:

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July 6, 2021

Katherine Perez
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

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July 6, 2021

Kenneth Woodrow
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA 93906

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Woodrow:

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July 6, 2021

Kerri Vera
Tule River Indian Tribe - Environmental Dept.
P.O. Box 589
Porterville, CA 93258

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

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July 6, 2021

Monica Arellano
Muwekma Ohlone Indian Tribe
20885 Redwood Rd, Suite 232
Castro Valley, CA 94546

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

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July 6, 2021

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Tule River Indian Tribe
P.O. Box 589
Porterville, CA 93258

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

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July 6, 2021

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Wilton Rancheria
9728 Kent St.
Elk Grove, CA 95624

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July 6, 2021

Timothy Perez
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

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July 1, 2022

Corrina Gould
The Confederated Villages of Lisjan
10926 Edes Ave.
Oakland, CA 94603

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Ms. Gould:

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Monica Arellano
Muwekma Ohlone Indian Tribe
20885 Redwood Rd, Suite 232
Castro Valley, CA 94546

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P.O. Box 589
Porterville, CA 93258

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Ms. Vera:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.25-acre (0.6-mile corridor) Area of Potential Effects (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act (Section 106). The APE is located in Mormon Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached Stockton West, California USGS 7.5' topographic quadrangle map.

We first contacted you regarding this project in July of last year. Since that time there have been minor revisions to the APE consisting of a small extension of the corridor to the north on South Wilson Way to just past East Anderson Street, and a limited widening of the corridor to the south into an industrial property north of Charter Way. We would like to ask if you could provide any information on presently undocumented Native American cultural properties within or in the vicinity of the APE. Any input or recommendations you could provide for the Project would be greatly appreciated. This request is being made for Section 106 outreach purposes only and any formal requests for consultation will be forwarded to the Corps although SAS will, if requested and as appropriate, facilitate the process. For your information, the Native American Heritage Commission Sacred Lands File record search indicates that no culturally significant properties have been identified in or near the APE.

If you have any questions or if you require any additional information, please feel free to contact me at your convenience. I can be reached via phone at 530-417-7007 or if you prefer by email at Brian@solanoarchaeology.com

Sincerely,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

P.O. Box 367
Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

July 1, 2022

Kenneth Woodrow
Wuksache Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA 93906

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Woodrow:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.25-acre (0.6-mile corridor) Area of Potential Effects (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act (Section 106). The APE is located in Mormon Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached Stockton West, California USGS 7.5' topographic quadrangle map.

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Sincerely,

Brian Ludwig, Ph.D.
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www.solanoarchaeology.com

July 1, 2022

Katherine Perez
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Ms. Perez:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.25-acre (0.6-mile corridor) Area of Potential Effects (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act (Section 106). The APE is located in Mormon Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached Stockton West, California USGS 7.5' topographic quadrangle map.

We first contacted you regarding this project in July of last year. Since that time there have been minor revisions to the APE consisting of a small extension of the corridor to the north on South Wilson Way to just past East Anderson Street, and a limited widening of the corridor to the south into an industrial property north of Charter Way. We would like to ask if you could provide any information on presently undocumented Native American cultural properties within or in the vicinity of the APE. Any input or recommendations you could provide for the Project would be greatly appreciated. This request is being made for Section 106 outreach purposes only and any formal requests for consultation will be forwarded to the Corps although SAS will, if requested and as appropriate, facilitate the process. For your information, the Native American Heritage Commission Sacred Lands File record search indicates that no culturally significant properties have been identified in or near the APE.

If you have any questions or if you require any additional information, please feel free to contact me at your convenience. I can be reached via phone at 530-417-7007 or if you prefer by email at Brian@solanoarchaeology.com

Sincerely,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

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Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

July 1, 2022

Joey Garfield
Tule River Indian Tribe
P.O. Box 589
Porterville, CA 93258

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Garfield:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.25-acre (0.6-mile corridor) Area of Potential Effects (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act (Section 106). The APE is located in Mormon Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached Stockton West, California USGS 7.5' topographic quadrangle map.

We first contacted you regarding this project in July of last year. Since that time there have been minor revisions to the APE consisting of a small extension of the corridor to the north on South Wilson Way to just past East Anderson Street, and a limited widening of the corridor to the south into an industrial property north of Charter Way.We would like to ask if you could provide any information on presently undocumented Native American cultural properties within or in the vicinity of the APE. Any input or recommendations you could provide for the Project would be greatly appreciated. This request is being made for Section 106 outreach purposes only and any formal requests for consultation will be forwarded to the Corps although SAS will, if requested and as appropriate, facilitate the process. For your information, the Native American Heritage Commission Sacred Lands File record search indicates that no culturally significant properties have been identified in or near the APE.

If you have any questions or if you require any additional information, please feel free to contact me at your convenience. I can be reached via phone at 530-417-7007 or if you prefer by email at Brian@solanoarchaeology.com

Sincerely,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

P.O. Box 367
Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

July 1, 2022

Jesus Tarango
Wilton Rancheria
9728 Kent St.
Elk Grove, CA 95624

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Tarango:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.25-acre (0.6-mile corridor) Area of Potential Effects (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act (Section 106). The APE is located in Mormon Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached Stockton West, California USGS 7.5' topographic quadrangle map.

We first contacted you regarding this project in July of last year. Since that time there have been minor revisions to the APE consisting of a small extension of the corridor to the north on South Wilson Way to just past East Anderson Street, and a limited widening of the corridor to the south into an industrial property north of Charter Way. We would like to ask if you could provide any information on presently undocumented Native American cultural properties within or in the vicinity of the APE. Any input or recommendations you could provide for the Project would be greatly appreciated. This request is being made for Section 106 outreach purposes only and any formal requests for consultation will be forwarded to the Corps although SAS will, if requested and as appropriate, facilitate the process. For your information, the Native American Heritage Commission Sacred Lands File record search indicates that no culturally significant properties have been identified in or near the APE.

If you have any questions or if you require any additional information, please feel free to contact me at your convenience. I can be reached via phone at 530-417-7007 or if you prefer by email at Brian@solanoarchaeology.com

Sincerely,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

P.O. Box 367
Elmira, CA 95625

707-718-1416 ▲ Fax 707-451-4775
www.solanoarchaeology.com

July 1, 2022

Dahlton Brown
Wilton Rancheria
9728 Kent St.
Elk Grove, CA 95624

Re: Mormon Slough Sewer Rehabilitation Project - City of Stockton, San Joaquin County, California

Dear Mr. Brown:

Basecamp Environmental has retained Solano Archaeological Services (SAS) to conduct a cultural resources inventory of an approximately 1.25-acre (0.6-mile corridor) Area of Potential Effects (APE) located in the City of Stockton, San Joaquin County, for the proposed Mormon Slough Sewer Rehabilitation Project (the Project). Due to U.S. Army Corps of Engineers permitting requirements, the Project is subject to Section 106 of the National Historic Preservation Act (Section 106). The APE is located in Mormon Slough at Wilson Way, and Jefferson Street and is situated in the *Campos De Los Franceses* land grant in projected Township 1 North, Range 6 East, Section 12 as depicted on the attached Stockton West, California USGS 7.5' topographic quadrangle map.

We first contacted you regarding this project in July of last year. Since that time there have been minor revisions to the APE consisting of a small extension of the corridor to the north on South Wilson Way to just past East Anderson Street, and a limited widening of the corridor to the south into an industrial property north of Charter Way.We would like to ask if you could provide any information on presently undocumented Native American cultural properties within or in the vicinity of the APE. Any input or recommendations you could provide for the Project would be greatly appreciated. This request is being made for Section 106 outreach purposes only and any formal requests for consultation will be forwarded to the Corps although SAS will, if requested and as appropriate, facilitate the process. For your information, the Native American Heritage Commission Sacred Lands File record search indicates that no culturally significant properties have been identified in or near the APE.

If you have any questions or if you require any additional information, please feel free to contact me at your convenience. I can be reached via phone at 530-417-7007 or if you prefer by email at Brian@solanoarchaeology.com

Sincerely,

Brian Ludwig, Ph.D.
Principal Investigator

Enc. Project location map

NATIVE AMERICAN CONSULTATION LOG FOR
MORMON SLOUGH SEWER REHABILITATION PROJECT,
CITY OF STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA

SAS Contact: Brian Ludwig, Ph.D.

Native American Consultant	Date of Correspondence	Responses
Muwekma Ohlone Indian Tribe of the SF Bay Area Monica Arellano, Vice Chairwoman	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message -no response
	7-5-2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
North Valley Yokuts Tribe Katherine Perez, Chairperson	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-18-2021	Ms. Perez contacted SAS via phone and expressed concerns regarding the potential for unanticipated discoveries and noting that the APE and surrounding area are archaeologically sensitive.
	7-5-2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change. Ms. Perez responded on 7-27 concerning potential sensitivity of the APE and recommended tribal/archaeological monitoring of ground-disturbing activities.
North Valley Yokuts Tribe Timothy Perez	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message - no response.
	7-5-2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
Tule River Indian Tribe Joey Garfield, Tribal Archaeologist	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for

NATIVE AMERICAN CONSULTATION LOG FOR
MORMON SLOUGH SEWER REHABILITATION PROJECT,
CITY OF STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA

SAS Contact: Brian Ludwig, Ph.D.

		any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
Tule River Indian Tribe Kerri Vera, Environmental Department	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project
	5-26-2021	Called and left message – no response
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
Tule River Indian Tribe Neil Peyron, Chairperson	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
Wilton Rancheria Dahlton Brown, Director of Administration	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response.
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-26-2022	Follow-up email concerning APE change

NATIVE AMERICAN CONSULTATION LOG FOR
MORMON SLOUGH SEWER REHABILITATION PROJECT,
CITY OF STOCKTON, SAN JOAQUIN COUNTY, CALIFORNIA

SAS Contact: Brian Ludwig, Ph.D.

Wilton Rancheria Jesus Tarango, Chairperson	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response.
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
Wilton Rancheria Steven Hutchason, THPO	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response.
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
Wuksache Indian Tribe/Eshom Valley Band Kenneth Woodrow, Chairperson	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response.
	7/5/2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change
The Confederated Villages of Lisjan Corrina Gould, Chairperson	5-14-2021	Mailed project introduction letter and maps depicting the APE. The letter invited consultation and asked for any information on unrecorded resources in the vicinity.
	5-19-2021	Contacted by email regarding the project.
	5-26-2021	Called and left message – no response.
	7-5-2021	Sent email and new letter hardcopy correcting "miner Slough" to "Mormon Slough" typo.
	7-2-2022	Sent letter concerning slight APE change
	7-27-2022	Follow-up email concerning APE change

APPENDIX D

— ♦ ♦ ♦ —

CENTRAL CALIFORNIA INFORMATION CENTER
RECORD SEARCH RESULTS

California Historical Resources Information System

CHRIS Data Request Form

ACCESS AND USE AGREEMENT NO.: _____ **IC FILE NO.:** _____

To: Central Coast Information Center

Print Name: Jason Coleman Date: April 1, 2021

Affiliation: Solano Archaeological Services

Address: 131 Sunset Avenue, Ste. E 120

City: Suisun City State: CA Zip: 94585

Phone: 707-718-1416 Fax: 707-451-1775 Email: jason@solanoarchaeology.com

Billing Address (if different than above): same

Billing Email: same Billing Phone: same

Project Name / Reference: Mormon Slough Sewer Rehab Project

Project Street Address: Wilson Way, Stockton

County or Counties: San Joaquin

Township/Range/UTMs: T1N; R7E

USGS 7.5' Quad(s): Stockton East

PRIORITY RESPONSE (Additional Fee): yes ■ / no ☐

TOTAL FEE NOT TO EXCEED: $ 800.00
(If blank, the Information Center will contact you if the fee is expected to exceed $1,000.00)

Special Instructions:

This records search is for a constraints analysis only and not for an official study. Please check only for cultural resources as directed on next page within 1/2 mi. If the bill looks like it's going to exceed $800 please call me at 707-718-1416. Thanks

---

Information Center Use Only

Date of CHRIS Data Provided for this Request: _____

Confidential Data Included in Response: yes ☐ / no ☐

Notes: _____

CHRIS Data Request Form

Mark the request form as needed. Attach a PDF of your project area (with the radius if applicable) mapped on a 7.5' USGS topographic quadrangle to scale 1:24000 ratio 1:1 neither enlarged nor reduced and include a shapefile of your project area, if available. Shapefiles are the current CHRIS standard for submitting digital spatial data for your project area or radius. **Check with the appropriate IC for current availability of digital data products.**

- Documents will be provided in PDF format. Paper copies will only be provided if PDFs are not available at the time of the request or under specially arranged circumstances.
- Location information will be provided as a digital map product (Custom Maps or GIS data) unless the area has not yet been digitized. In such circumstances, the IC may provide hand drawn maps.
- In addition to the $150/hr. staff time fee, client will be charged the Custom Map fee when GIS is required to complete the request [e.g., a map printout or map image/PDF is requested and no GIS Data is requested, or an electronic product is requested (derived from GIS data) but no mapping is requested].

For product fees, see the CHRIS IC Fee Structure on the OHP website.

1. Map Format Choice:

Select One: Custom GIS Maps ☒ GIS Data ☐ Custom GIS Maps **and** GIS Data ☐ No Maps ☐

Any selection below left unmarked will be considered a "no. "

Location Information:

	Within project area	Within .5 mi. radius
ARCHAEOLOGICAL Resource Locations[1]	yes ☒ / no ☐	yes ☒ / no ☐
NON-ARCHAEOLOGICAL Resource Locations	yes ☒ / no ☐	yes ☒ / no ☐
Report Locations[1]	yes ☒ / no ☐	yes ☐ / no ☒
"Other" Report Locations[2]	yes ☒ / no ☐	yes ☐ / no ☒

3. Database Information:
(contact the IC for product examples, or visit the SSJVIC website for examples)

	Within project area	Within .5 mi. radius
ARCHAEOLOGICAL Resource Database[1]		
List (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Detail (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Excel Spreadsheet	yes ☒ / no ☐	yes ☒ / no ☐
NON-ARCHAEOLOGICAL Resource Database		
List (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☒ / no ☐
Report Database[1]		
List (PDF format)	yes ☒ / no ☐	yes ☒ / no ☐
Detail (PDF format)	yes ☐ / no ☒	yes ☐ / no ☒
Excel Spreadsheet	yes ☒ / no ☐	yes ☒ / no ☐
Include "Other" Reports [2]	yes ☐ / no ☒	yes ☐ / no ☒

4. Document PDFs (paper copy only upon request)**:**

	Within project area	Within .5 mi. radius
ARCHAEOLOGICAL Resource Records[1]	yes ☒ / no ☐	yes ☐ / no ☒
NON-ARCHAEOLOGICAL Resource Records	yes ☒ / no ☐	yes ☐ / no ☒
Reports[1]	yes ☐ / no ☒	yes ☐ / no ☒
"Other" Reports[2]	yes ☐ / no ☒	yes ☐ / no ☒

CHRIS Data Request Form

5. Eligibility Listings and Documentation:

	Within project area	Within .5 mi. radius
OHP Built Environment Resources Directory[3]:		
Directory listing only (Excel format)	yes ☒ / no ☐	yes ☐ / no ☒
Associated documentation[4]	yes ☒ / no ☐	yes ☐ / no ☒
OHP Archaeological Resources Directory[1,5]:		
Directory listing only (Excel format)	yes ☒ / no ☐	yes ☐ / no ☒
Associated documentation[4]	yes ☒ / no ☐	yes ☐ / no ☒
***California Inventory of Historic Resources* (1976):**		
Directory listing only (PDF format)	yes ☒ / no ☐	yes ☐ / no ☒
Associated documentation[4]	yes ☒ / no ☐	yes ☐ / no ☒

6. Additional Information:

The following sources of information may be available through the Information Center. However, several of these sources are now available on the OHP website and can be accessed directly. The Office of Historic Preservation makes no guarantees about the availability, completeness, or accuracy of the information provided through these sources. Indicate below if the Information Center should review and provide documentation (if available) of any of the following sources as part of this request.

Caltrans Bridge Survey	yes ☐ / no ☒
Ethnographic Information	yes ☐ / no ☒
Historical Literature	yes ☐ / no ☒
Historical Maps	yes ☐ / no ☒
Local Inventories	yes ☐ / no ☒
GLO and/or Rancho Plat Maps	yes ☐ / no ☒
Shipwreck Inventory	yes ☐ / no ☒
Soil Survey Maps	yes ☐ / no ☒

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[1] In order to receive archaeological information, requestor must meet qualifications as specified in Section III of the current version of the California Historical Resources Information System Information Center Rules of Operation Manual and be identified as an Authorized User or Conditional User under an active CHRIS Access and Use Agreement.

[2] "Other" Reports GIS layer consists of report study areas for which the report content is almost entirely non-fieldwork related (e.g., local/regional history, or overview) and/or for which the presentation of the study area boundary may or may not add value to a record search.

[3] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Includes, but not limited to, information regarding National Register of Historic Places, California Register of Historical Resources, California State Historical Landmarks, California State Points of Historical Interest, and historic building surveys. Previously known as the HRI and then as the HPD, it is now known as the Built Environment Resources Directory (BERD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

[4] Associated documentation will vary by resource. Contact the IC for further details.

[5] Provided as Excel spreadsheets with no cost for the rows; the only cost for this component is IC staff time. Previously known as the Archaeological Determinations of Eligibility, now it is known as the Archaeological Resources Directory (ARD). The Office of Historic Preservation compiles this documentation and it is the source of the official status codes for evaluated resources.

STOCKTON WEST QUADRANGLE
CALIFORNIA
TOPOGRAPHIC SERIES

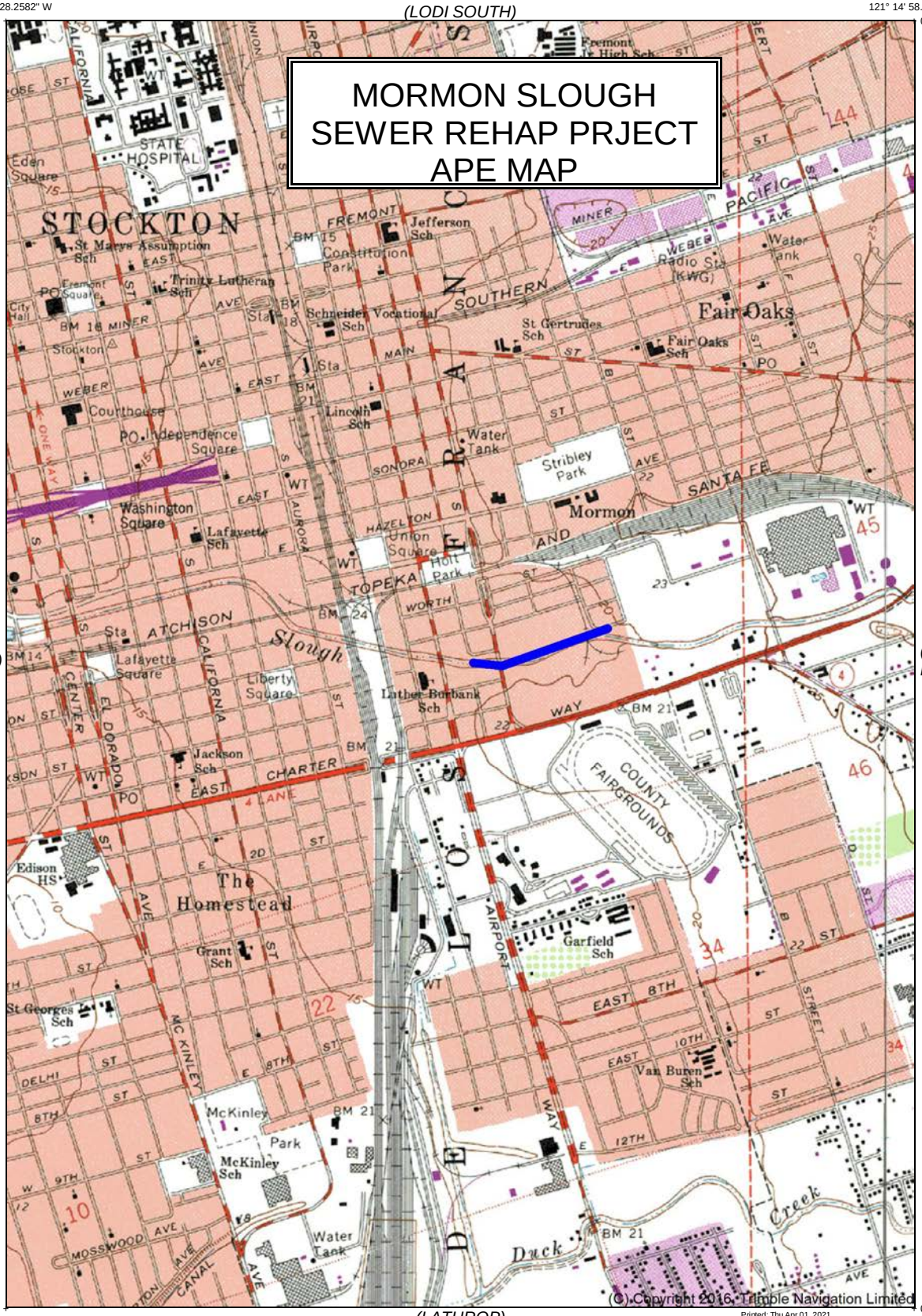
(TERMINOUS) (LODI SOUTH) (WATERLOO)

121° 17' 28.2582" W
037° 58' 03.6650" N

121° 14' 58.1833" W
037° 58' 03.6650" N

MORMON SLOUGH SEWER REHAP PRJECT APE MAP

(HOLT) (STOCKTON EAST)



Printed: Thu Apr 01, 2021

037° 55' 16.0295" N
121° 17' 28.2582" W

(LATHROP)

037° 55' 16.0295" N
121° 14' 58.1833" W

(UNION ISLAND) (MANTECA)

SCALE 1:24000

Declination

GN MN

GN 1.06° E
MN 13.25° E

0 1
Mile

0 1000
Yards

0 1
Kilometer

CONTOUR INTERVAL 5 FT

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000 Maps

North American 1983 Datum (NAD83)

To place on the predicted North American 1927 move the projection lines 8M S and 93M W

37121-G3-TM-024
STOCKTON WEST, CA
JAN 1, 1987

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

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

Date: 4/2/2021

Records Search File No.: 11737L
Project: Mormon Slough Sewer Rehab
Wilson Way, Stockton

Jason Coleman
Solano Archaeological Services
131 Sunset Avenue, Suite E 120
Suisun City, CA 94585
707-718-1416 jason@solanoarchaeology.com

Dear Mr. Coleman:

The Central California Information Center received your **Priority Response** 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 ☐ GIS Data/shape files ☐ hand-drawn maps

Summary Data:

Resources within the project area:	None formally reported to the Information Center.
Resources within the 1/2-mile radius:	15: P-39-000002, 112, 393, 469, 2388, 4266, 4267, 4302, 4349, 4350, 4351, 4457, 5114, 5142, 5377
Reports within the project area:	3: SJ-02219, 2246, 2247
Reports within the 1/2-mile radius:	18: SJ-00764, 3187, 3845, 3995, 4121, 4197, 4589, 4647, 5028, 5895, 6318, 6345, 6511, 7197 7539, 7598, 8196, 8284

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 on project
Report Copies:	☐ enclosed ☒ not requested ☐ nothing listed
OHP Historic Properties Directory: New Excel File: Built Environment Resource Directory (BERD) Dated 12/17/2019	☐ 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
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

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 *($803.02), payable within 60 days of receipt of the invoice.

If you wish to include payment by Credit Card, you must wait to receive the official invoice from Financial Services so that you can reference the CMP # (Invoice Number), and then contact the link below:

https://commerce.cashnet.com/ANTHROPOLOGY

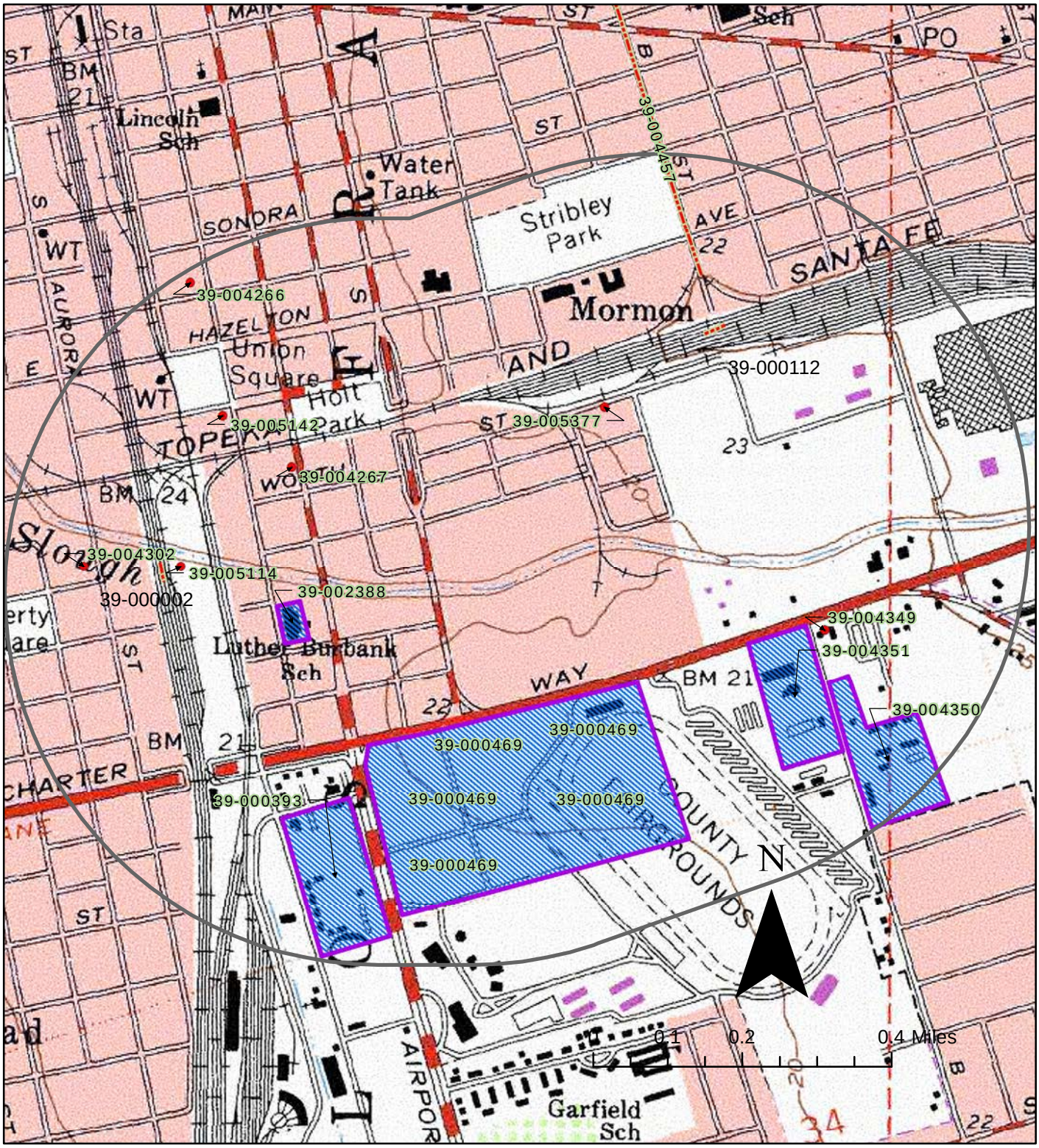
Sincerely,

E. A. Greathouse

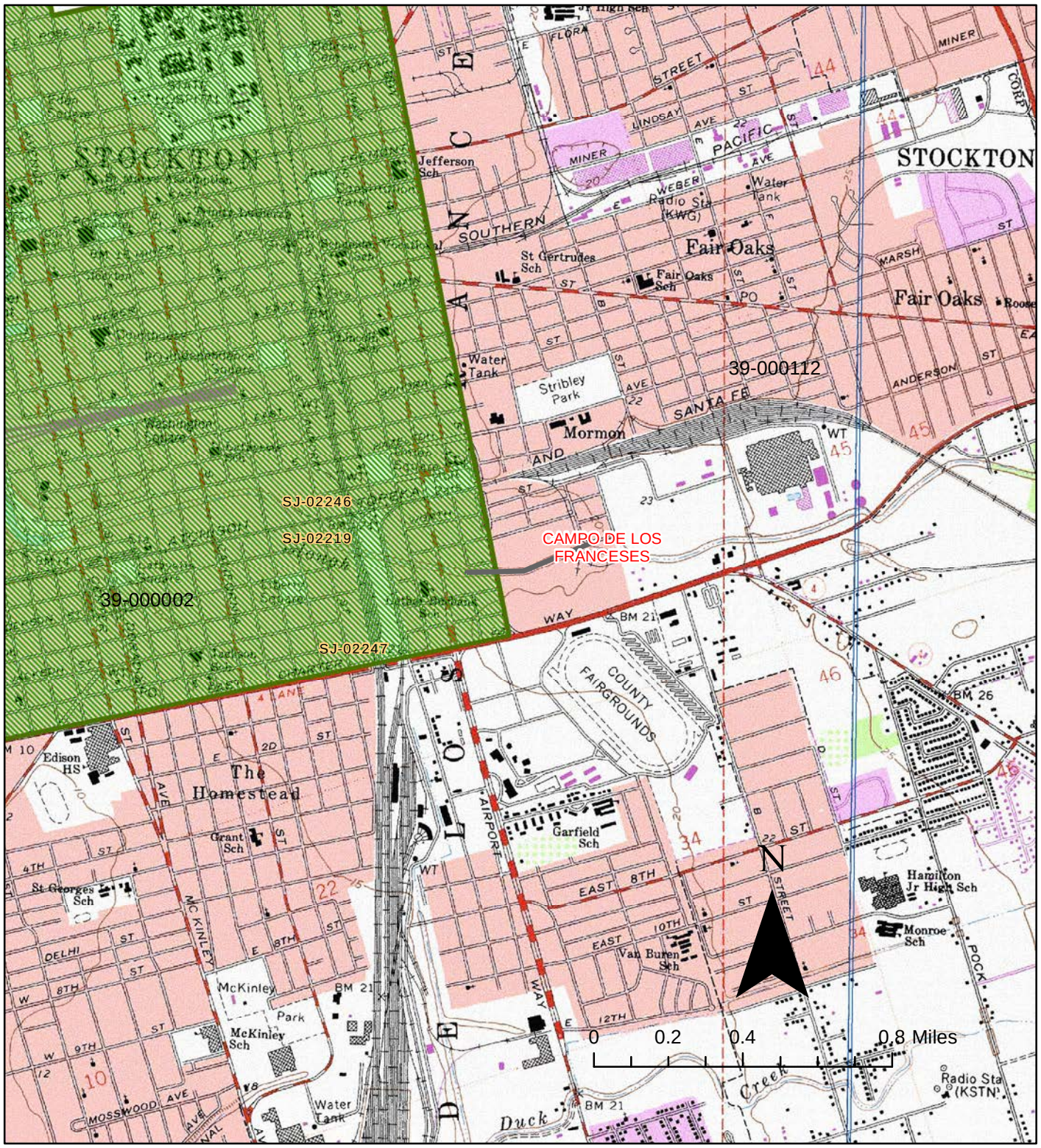
E. A. Greathouse, Coordinator
Central California Information Center
California Historical Resources Information System

* Invoice Request sent to: ARBilling@csustan.edu, CSU Stanislaus Financial Services

CCaIC 11737L Mormon Slough Sewer Rehab Project
Resources 1/2-mile radius 1:12,000-scale
Stockton West USGS 7.5' Quadrangle



CCaIC 11737L Mormon Slough Sewer Rehab Project
Reports on Project 1:24,000-scale
Stockton West USGS 7.5' Quadrangle



Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-39-000002	CA-SJO-000250H	Other - Western Pacific Railroad; Other - Central Pacific Railroad; Other - Stockton & Visalia RR; Other - San Pablo & Tulare Extension RR; Other - San Joaquin & Sierra Nevada RR; Other - Kentucky House Branch (Calaveras Branch); Other - S.P. RR San Joaquin Valley Mainline; Resource Name - Southern Pacific Railroad in San Joaquin County; Other - Southern Pacific Railroad West Side line; Other - Southern Pacific Railroad Altamont Pass Route; Other - Southern Pacific Railroad Lodi to Valley Springs	Structure, Site	Historic	AH02; AH04; AH07; AH11; HP11	; 1993 (JRP Historical Consulting, Woodward-Clyde); 1993 (J. Costello and J. Marvin, Foothill Resources, Ltd.); 1994 (JRP Historical Consulting, Woodward-Clyde); 1994 (JRP Historical Consulting, Woodward-Clyde); 1994 (JRP Historical Consulting, Woodward-Clyde); 1994 (JRP Historical Consulting, Woodward-Clyde); 1997 (Christopher Dore, W. L. Norton, Jones & Stokes Associates); 2001 (R. Egherman, URS Corporation); 2001 (R. Egherman, URS Corporation); 2001 (T. Bakic et al., PAR Environmental Services); 2002 (C. Gross, EDAW); 2002 (D. Byrd, Jones & Stokes); 2002 (R. Windmiller, Consulting Archaeologist); 2002 (R. Reno, MACTEC); 2002 (R. Reno, MACTEC); 2003 (Jon Brady, Caltrans); 2003 (Schmidt et al., PAR Environmental Services); 2005 (M. R. Bowen, Jones & Stokes); 2006 (E. T. Jones, LSA Associates); 2007 (D. Jurich and J. Martinez, PBS & J); 2008 (M. Hibma, LSA Associates); 2008 (J. Martinez, PBS & J); 2010 (G. Rainka, JRP Historical Consulting); 2011 (Pappas et al., ECORP); 2012 (Ford, HDR Engineering, Inc); 2018 (Wisely, Far Western)	AP-05501, CA-03379, CA-05342, CA-05498, ME-03995, SJ-02824, SJ-03379, SJ-03995, SJ-04376, SJ-04386, SJ-04509, SJ-04786, SJ-04943, SJ-05033, SJ-05047, SJ-05138, SJ-05159, SJ-05309, SJ-05342, SJ-05498, SJ-05501, SJ-05503, SJ-05622, SJ-05626, SJ-05734, SJ-05746, SJ-06330, SJ-06345, SJ-06447, SJ-06625, SJ-06878, SJ-06993, SJ-07048, SJ-07063, SJ-07230, SJ-07231, SJ-07232, SJ-07293, SJ-07465, SJ-07539, SJ-07719, SJ-07956, SJ-08015, SJ-08016, SJ-08299, SJ-08642, SJ-08988, ST-03995, ST-06625, ST-06878, TO-06878

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-39-000112	CA-SJO-000293H	Resource Name - BNSF Railroad; Resource Name - Atchison, Topeka & Santa Fe Railroad / Burlington Northern SF RR	Structure	Historic	AH07; HP19; HP37	2001 (S. Ashkar, C. Fish, Jones & Stokes Associates, Inc.); 2001 (B. Tang and D. Ballester, Caltrans District 10); 2001 (Bai "Tom" Tang, Daniel Ballester, CRM-TECH); 2003 (B. Larson, E. Johnson, JRP Historical Consulting Services); 2005 (S. Ashkar, Jones & Stokes Associates, Inc.); 2007 (John L. Brady, Caltrans District 6); 2009 (Martin, Frank and Campbell, Garcia and Associates); 2011 (S. Pappas and Quivey, Cardno ENTRIX); 2013 (D. Stapleton, Parus Consulting)	ME-02759, SJ-02759, SJ-04459, SJ-05170, SJ-06095, SJ-06216, SJ-06666, SJ-06975, SJ-07182, SJ-07539, SJ-07813, SJ-07933, SJ-07997, SJ-07998, SJ-07999, ST-02759
P-39-000393		Resource Name - United States Forest Service Stockton Supply Depot	Building	Historic	HP14; HP34	1982 (Dana Supernowickz, USDA-Forest Serive California Region)	SJ-03187
P-39-000469		CHL - 934; Resource Name - CHL #934:Temporary Detention Camps for Japanese Americans (at Stockton Fairgrounds)	Site, Other	Historic	HP34; HP39	1980 (Ray Okamura, Ethnic Minority Cultural Resources)	SJ-03845
P-39-002388		Resource Name - Burbank (Luther) School, 1130 (1120-1130?) S. Pilgrim St., Stockton; OHP PRN - 5208-1337-0000 (HRI form not on file as of 4/2019)	Building	Historic	HP13; HP15	(San Joaquin County Superintendent of Schools, Public Schools of San Joaquin County 1852-1990 (1991));	
P-39-004266			Building	Historic	HP02	1979 (Ted Walker/ Karen J. Weitze, Stockton Historic Buildings Survey)	
P-39-004267		Resource Name - 815 S. Airport Way, Stockton; OHP PRN - 5208-0113-0000	Building	Historic	HP02	1979 (Ted Walker/Karen J. Weitze, Stockton Historical Buildings Survey)	
P-39-004302		Resource Name - 947 S. Aurora St., Stockton	Building	Historic	HP02	1979 (Linda Derivi/Herman Hermenau/Karen J. Weitze, Stockton Historical Buildings Survey)	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-39-004349		Resource Name - Clark Property, 2000/2024 E. Charter Way, Stockton; Other - No. 22	Building	Historic	HP02; HP06; HP08	2002 (Judith Marvin/ Terry Brejla, LSA Associates, Inc.; for Augustine Land Use Planning)	SJ-04647
P-39-004350		Other - No. 23; Resource Name - District 10 Stockton Maintenance Yard, 1604 S. B St., Stockton	Building	Historic	HP08; HP14	2002 (Judith Marvin/ Terry Brejla, LSA Associates, Inc., for Augustine Land Use Planning); 2002 (Amy Augustine, Augustine Land Use Planning); 2009 (Chris Kuzak, Department of Transportation, District 10)	SJ-04647, SJ-07197
P-39-004351		Resource Name - Caltrans District 10 Headquarters Complex, 1976 E. Charter Way, Stockton; Other - No. 26	Building	Historic	HP14	2002 (Judith Marvin/ Terry Brejla, LSA Associates, Inc., for Augustine Land Use Planning)	SJ-04647
P-39-004457	CA-SJO-000294H	Other - Central CA Traction Railroad J-11; Resource Name - Central California Traction Company Railroad; Other - Central California Traction Railroad	Structure	Historic	AH07; HP11	2003 (B. Larson, E. Johnson, JRP Historical Consulting Services); 2008 (Jesse Martinez, PBS & J); 2010 (Peter J. Morris, PARUS Consulting, Inc.); 2011 (Pappas & Westwood, By ECORP, for Cardno ENTRIX)	AP-05501, CA-05498, SJ-05498, SJ-05501, SJ-05503, SJ-06702, SJ-07048, SJ-07220, SJ-07539, SJ-07598
P-39-005142		Other - CRM TECH 2561-2; Resource Name - Geiger Manufacturing. Inc.	Building	Historic	HP08	2012 (Jacquemain, T., CRM TECH)	
P-39-005377		Resource Name - Station 19 Pump House	Structure	Historic	HP11	2020 (Nayyar & Wendt, Michael Baker International)	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SJ-00764	NADB-R - 1361607	1981	Napton, L. K.	Cultural Resource Reconnaissance of the B Street Reconstruction, San Joaquin County, California.	CSU, Stanislaus	
SJ-02219	NADB-R - 1362037	1979	Stockton, City of	Historic Survey Project Agreement, Final Report; Project Period June 1, 1978 to March 31, 1979.	City of Stockton	39-000816, 39-000817, 39-000818, 39-000819, 39-000820, 39-000821, 39-000823, 39-000824, 39-004298, 39-004303, 39-004308
SJ-02246	NADB-R - 1362013	1980	Hermenau, H.	Completion Report, Historic Survey Project Agreement No. 36-09-006, Stockton, California; Project Period April 1, 1979 to March 31, 1980.	City of Stockton	39-001838, 39-004298, 39-004303
SJ-02247	NADB-R - 1362016	1980	Rapp, Linda	Stockton Historic Resource Inventory II: Analysis Report, June 1980.	City of Stockton	39-004298, 39-004303
SJ-03187	NADB-R - 1363381	1982	Dougherty, J. and D. Supernowicz	Archaeological Reconnaissance Report; ARR 05-03-48; Pendola Land Exchange.	Eldorado National Forest	39-000393
SJ-03845	NADB-R - 1366207	1999	Burton, J., M. M. Farrell, F.B. Lord, and R.W. Lord	Confinement and Ethnicity: An Overview of World War ll Japanese American Relocation Sites		39-000469, 50-000527
SJ-03995	NADB-R - 1366235	2000	Nelson, W. J.	Cultural Resource Survey for the Level (3) Communications Long Haul Fiber Optics Project; Segment WS04: Sacramento to Bakersfield	Far Western Anthropological Research Group, Inc.; for Parsons, Brinckerhoff Network Services	39-000002, 39-000354, 50-000001, 50-000439
SJ-04121	NADB-R - 1363855	2000	Wulf, Erick	Department of Transportation Negative Archaeological Survey Report, 10-SJ-4, P.M. DO.	Erick Wulf	
SJ-04197	NADB-R - 1364088	2000	Keefe, T.	Department of Transportation Negative Archaeological Survey Report: 10-SJO-4, P.M. 18.0, EA #10-OC0701.	T. Keefe	
SJ-04589	NADB-R - 1364512	2001	Billat, L. B.	SBA Communications Wireless Telecommunications Service Facility--San Joaquin and Stanislaus Counties, California: Hazelton (CNSS-66501-012), 820 Aurora Street, Stockton.	Lorna Beth Billat, Historic Archaeologist	
SJ-04647	NADB-R - 1364561	2002	Davis-King, S. and J. Marvin	Historic Property Survey Report for the Proposed South B Street Improvements, Ralph Avenue to Charter Way, San Joaquin County, California.	Davis-King and Associates (and) LSA Associates, Incorporated	39-004319, 39-004320, 39-004321, 39-004322, 39-004323, 39-004324, 39-004325, 39-004326, 39-004327, 39-004328, 39-004329, 39-004349, 39-004350, 39-004351

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SJ-05028	NADB-R - 1364916	1990	Roeser, E. H.	San Joaquin General Hospital: A Historical Review.	Historian	
SJ-05895	NADB-R - 1365872	2005	Aislin-Kay, M.	Cultural Resouce Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate, SCRMCAT338 (Hwy 4 and Charter Way), 1444 East Mariposa Rd, Stockton, San Joaquin Co, CA	Michael Brandman Assc.	
SJ-06318	NADB-R - 1366543	2006	Jensen, S.	Archaeological Inventory Survey, 2nd Street Development Project, c. 1 acre, Adjacent to Airport Way and Union Street, Stockton, San Joaquin County, California.	Genesis Society	
SJ-06345	NADB-R - 1366576	2006	SWCA Environmental Consultants	Cultural Resources Final Report of Monitoring and Findings for the QWest Network Construction Project, State of California. SWCA Project No. 10715-180.	SWCA Environmental Consultants, for Qwest Communications	39-000002, 39-000354
SJ-06511	NADB-R - 1366736	2005	Hooks, C.	New Tower ("NT") Submission Packet FCC Form 620, Cano Funeral Home SC13310B	Practical Environmental Solutions LLC	
SJ-07197	NADB-R - 1367514	2010	Kuzak, C.	Department of Transportation Historical Resources Compliance Report for Caltrans District 10 CREB Project, Stokcton Maintenance Yard, EA 22-943415.	C. Kuzak, Architectural Historian	39-004350
SJ-07539	NADB-R - 1367892	2011	Pappas, S. and L. Westwood	Cultural Resources Inventory Report, Stockton "A" Reconductoring Project, San Joaquin County, California; ECORP Project No. 2011-123.	ECORP Consulting, Inc.; for PG&E, Cardno ENTRIX, and Surf to Snow Environmental Resource Management	39-000002, 39-000100, 39-000112, 39-004457, 39-005114, 39-005115, 39-005116
SJ-07598	NADB-R - 1367961	2012	Arrington, C.	Cultural Resources Constraints Study of the Stockton A Weber #1 Wood Pole Replacement Project, San Joaquin County, California, PG & E No. 30764919.	Parus Consulting; for PG & E	39-004457
SJ-08196		2014	DePietro, D. and C. D. Wills	Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate Stockton Fairgrounds, 1549 South Union Street, Stockton, San Joaquin County, California, EBI Project No. 61148542.	Michael Brandman Associates for Verizon Wireless	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
SJ-08284		2011	AECOM	Cultural Resources Inventory Report for the Central Valley Independent Network Fiber Optic Communications Network Project, California (Calaveras, Merced, San Joaquin, Stanislaus and Tuolumne Counties in the CCaIC Area of Responsibility)	AECOM; for Central Valley Independent Network	