Draft

CEQA Plus Initial Study and Mitigated Negative Declaration

Isleton Wastewater Treatment System Improvement Project

City of Isleton, California

Prepared For:

City of Isleton
101 2nd Street
Isleton, California 95641

Prepared By:

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February 2023

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DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency:	City of Isleton
Project Proponent:	City of Isleton
Project Location:	The Isleton Wastewater Treatment System Improvement Project is located within the City of Isleton street rights-of-way and sewer easements along various streets within the City and at the City's Wastewater Treatment Facility. The Project is located in Section 26 of Township 4 North, Range 3 East (Mount Diablo Base and Meridian). The approximate center of the Project Site is located at latitude 38.161281° and longitude -121.605073°

Project Description:

The Proposed Project includes sanitary sewer improvements, earthwork for raising pond berms, storm drain reconnections and equipment upgrades at the City's Wastewater Treatment Facility (WWTF, Figures 2a and 2b). The Proposed Project includes replacement of approximately 6,150 linear feet of wastewater gravity pipeline, abandonment of 660 linear feet of gravity sewer, 33 maintenance holes, and abandonment of 5,070 linear feet of wastewater gravity pipeline. Storm drain reconnections will include approximately 1,200 linear feet of new storm drain pipe, nine maintenance holes, and six drain inlet connections. Equipment upgrades at the WWTF will generally include installation of a new backup generator, new aerators, blowers and other required electrical equipment.

The sanitary sewer improvements and storm drain reconnections will occur in segments within the City limits. The City limits are bound on the east by West Tyler Island Bridge Road, on the south by 6th Street, on the north by the Sacramento River and on the west by a canal west of Georgiana Court. Figures 2a and 2b provide the Project site plans.

The Project will abandon in place portions of the pipeline while removing other portions. Most of the construction will occur within the existing street Right-of-Way (ROW), with the exception of four segments. One segment of sanitary sewer replacement is within an easement that runs along private property from Third to Fourth avenues. One storm drain segment installation is within an easement from the Isleton Mobile Home Park east of Miners Court south to Third Avenue. The remaining two segments run east from Gaswell Road to F Street and from F Street to G Street and are to be abandoned. It is anticipated that installation will be completed by open trenching, but pipe bursting or boring may be utilized in areas where work area is limited in easements.

Additionally, the Project includes the raising of the berm on Treatment Pond #1 in order to provide 2 feet of freeboard and maintain retention time in the pond for treatment. This would require the import of approximately 1,000 cubic yards of fill material from outside the City and Project Site. All the other ponds are not anticipated to need the berms raised with this project.

Public Review Period: March 1, 2023 to March 30, 2023

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

AQ-1: **Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust.** The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. Although the following measures are outlined in the Sacramento Metropolitan Air Quality Management District's CEQA guidelines, they are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Water all exposed surfaces two times daily. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All roadway, driveway, sidewalk, and parking lot paving should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (required by CCR, Title 13, sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *The City of Isleton Planning Department and construction lead*

BIO-1: **General.** The Project will implement erosion control measures and BMPs to reduce the potential for sediment or pollutants at the Project site. Measures may include the following:

- Fiber rolls used for erosion control will be certified by the California Department of Food and Agriculture as weed-free.
- Seed mixtures applied for erosion control will not contain California Invasive Plant Council-designated invasive species (http://cal-ipc.org/) and will be composed of native species appropriate for the site.
- Trash generated onsite will be promptly and properly removed from the site.
- Any fueling in the upland portion of the Study Area will use appropriate secondary containment techniques to prevent spills.
- A qualified biologist will conduct a mandatory Worker Environmental Awareness Program for all contractors, work crews, and any onsite personnel on the potential for special status species to occur on the Project site. The training will provide an overview of habitat and characteristics of the species, the need to avoid certain areas, and the possible penalties for non-compliance.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-2: **Northwestern Pond Turtle.** Conduct a preconstruction northwestern pond turtle survey in the Project Area within 48 hours prior to construction activities. Any northwestern pond turtle individuals discovered in the Project work area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-3: **Giant Garter Snake.** To the extent feasible, work within suitable habitat for giant garter snake should be limited to the active season, approximately May 1 to October 1.

Conduct a preconstruction giant garter snake survey in the Project area within 24 hours prior to construction activities. Any giant garter snake individuals discovered in the Project work area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 200 feet from the Project work area where they were found.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-4: **Nesting Birds.** To protect nesting birds, no Project activity shall begin from February 1 through August 31 unless the following surveys are completed by a qualified wildlife biologist. Separate surveys and avoidance requirements are listed below for all nesting birds and raptors, including, burrowing owl and Swainson's hawk.

- All Nesting Birds - Within 14 days prior to construction (or less if recommended by CDFW), a qualified biologist shall survey for nesting activity of birds within each Project work area and a 100-foot radius. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
- Raptors– Within 14 days prior to construction, a qualified biologist survey for nesting activity of birds of prey within each Project work area and a 500-foot radius. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
- Burrowing owl – Within 14 days prior to construction, a qualified wildlife biologist shall survey for burrowing owl within the Project work area and a 250-foot radius of the Project work area. Surveys shall be conducted at appropriate times (dawn or dusk) to maximize detection. Any active nests observed shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
- Swainson's hawk – Within 14 days prior to construction, a qualified biologist shall survey for nesting activity of Swainson's hawk within each Project work area and a 0.25-mile radius. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-5: **Bats.** Within 6 months of proposed removal of potential roosting habitat, a qualified biologist will survey for all suitable roosting habitat (e.g., manufactured structures, trees) proposed for removal. If suitable roosting habitat is identified and proposed for removal, a qualified biologist will conduct an evening bat emergence survey that may include acoustic

monitoring to determine whether or not bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities may be required. If bats are not found during the preconstruction surveys, no further measures are necessary.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

CUL-1: **Protection of Unknown Cultural Resources.** If subsurface deposits believed to be cultural or human in origin are discovered during grading and construction activities, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the City. The City, with assistance from the professional archaeologist, shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, the City, with assistance from the professional archaeologist, shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, Section 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the

landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *Prior to and during construction*

Monitoring/Enforcement: *City of Isleton*

CUL-2: **Tribal Monitoring.** One tribal monitor from a culturally affiliated consulting Native American tribe (Northern Valley Yokut/Ohlone/Patwin) shall be retained by the City to monitor all vegetation clearing and removal, and all initial ground-disturbing activity within the Project Area. Tribal monitoring is not required during above-surface construction activities, installation of equipment or facilities into excavated areas, or during backfilling, recontouring, or revegetation.

The tribal monitor shall have the authority to temporarily pause ground disturbance within 50 feet of the discovery for a duration long enough to examine potential TCRs that may become unearthed during the activity. If no TCRs are identified, construction activities shall proceed and no agency notifications are required. In the event that a TCR is identified, the monitor shall flag off the discovery location and notify the City of Isleton immediately to consult on appropriate treatment.

Timing/Implementation: *During vegetation clearing and removal, and all initial ground disturbing activity*

Monitoring/Enforcement: *City of Isleton*

GEO-1 If paleontological or other geologically sensitive resources are identified during any phase of project development, the construction manager shall cease operation at the site of the discovery and immediately notify the City of Isleton Public Works. The City shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less than significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project Site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *City of Isleton*

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LIST OF ACRONYMS AND ABBREVIATIONS

°F	Degrees Fahrenheit
AB	Assembly Bill
AMSL	Above mean sea level
ANSI	American National Standards Institute
APE	Area of Potential Effects
BACT	Best Available Control Technology
BALMD	Brannan-Andrus Levee Maintenance District
BCC	Bird of Conservation Concern
BMPs	Best Management Practices
BMSL	Below mean sea level
BP	Before present
BRA	Biological Resource Assessment
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CCTS	Central California Taxonomic System
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	Methane
CHRIS	California Historical Resources Information System
City	City of Isleton
CNDDB	California Natural Diversity Database
CNEL	Community noise equivalent level
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Places
CRPR	California Rare Plant Rank
CWA	Federal Clean Water Act
CWSRF	Clean Water State Revolving Fund
CZMA	Coastal Zone Management Act

LIST OF ACRONYMS AND ABBREVIATIONS

CZMP	Coastal Zone Management Plan
dB	Decibel
dBA	A-weighted Decibel
Delta	Sacramento-San Joaquin Delta
DMR	Division of Mine Reclamation
DOC	California Department of Conservation
DOF	Department of Finance
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
DPS	Distinct Population Segment
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EMS	Emergency Medical Service
EO	Executive Order
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
fc	Foot-candle
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farm Protection Policy Act
FTA	Federal Transit Administration
General Permit	General Construction Activity Stormwater Permit
GHGs	Greenhouse Gases
GLO	General Land Office
HMP	Hazardous Materials Business Plan
IFD	Isleton Fire Department
IS	Initial Study
kWh	Kilowatt hour
L_{dn}	Day-night average sound level
L_{eq}	Equivalent continuous sound level
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
MSA	Magnuson-Stevens Fishery Conservation and Management Act
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards

LIST OF ACRONYMS AND ABBREVIATIONS

NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NEPA	National Environmental Policy Act
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NO_x	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWSRS	National Wild and Scenic River System
O_3	Ozone
OHP	California Office of Historic Preservation
OPR	Office of Planning and Research
PGA	Peak Ground Acceleration
PG&E	Pacific Gas & Electric Company
PM_{10} and $PM_{2.5}$	Particulate Matter
ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resource Code
Project/Proposed Project	Isleton Wastewater Treatment System Improvement Project
RCEM	Roadway Construction Emissions Model
RD	Reclamation District
RDUSD	River Delta Unified School District
ROGs	Reactive Organic Gases
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SDWA	Safe Drinking Water Act of 1974
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLF	Sacred Lands File
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	Sulfur Dioxide
SR	State Route
SSC	Species of special concern
SSHCP	South Sacramento County Conservation Program
SVAB	Sacramento Valley Air Basin
SWPPP	Storm Water Pollution Prevention Plan

LIST OF ACRONYMS AND ABBREVIATIONS

SWRCB	State Water Resources Control Board
System	Coastal Barrier Resources System
TAC	Toxic Air Contaminants
TCRs	Tribal Cultural Resources
UAIC	United Auburn Indian Community
UCMP	California Museum of Paleontology
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled
WWTF	Wastewater Treatment Facility

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1.0 BACKGROUND

1.1 Summary

Project Title:	Isleton Wastewater Treatment System Improvement Project
Lead Agency Name and Address:	City of Isleton 101 2nd Street Isleton, California 95641
Contact Person and Phone Number:	Charles Bergson, City Manager 916-777-7770
Project Owner	City of Isleton
Project Location:	The Project Area is located in the City of Isleton street right-of-way (ROW) and easements along various streets within the City including: Sewer Project A: 4th Avenue, Delta Avenue, and Jackson Boulevard Sewer Project B: City easement west of Delta Avenue between 3rd and 4th Avenue Sewer Project C: 5th Street and D Street Sewer Project D: A Street Sewer Project E: Main Street, between E Street and F Street Sewer Project F: Gaswell Road and Union Street Sewer Project G: F Street Sewer Project H: Union Street and H Street Storm Drain Project A: Storm drainage installation and abandonment: Isleton Mobile Home Park Miscellaneous: at the WWTF See Figures 1, 2a and 2b. The Project is located in Section 26 of Township 4 North, Range 3 East (Mount Diablo Base and Meridian). The approximate center of the Project Site is located at latitude 38.161281° and longitude -121.605073°.
General Plan Designation:	Various
Zoning:	Various

1.2 Introduction

The City of Isleton (City) is the Lead Agency for this Initial Study (IS). ECORP prepared this IS to identify and assess the anticipated environmental impacts of the City's Isleton Wastewater Treatment System Improvement Project (Project or Proposed Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resource Code [PRC], Section 21000 et seq.) and state CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. A CEQA IS is generally used to determine which CEQA document is appropriate for a Project (Negative Declaration, Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

The City is seeking funding for the Proposed Project under the State Water Resources Control Board's (SWRCB) Clean Water State Revolving Fund (CWSRF) Program, which is partially funded through the U.S. Environmental Protection Agency (USEPA). Because of the federal nexus with the USEPA, projects seeking funding through the CWSRF Program are subject to federal laws and regulations (e.g., federal *cross-cutters*). Under the CWSRF Program, SWRCB uses a project's CEQA document along with federal cross-cutting documentation in place of a National Environmental Policy Act (NEPA) document; this document is termed a *CEQA-Plus* document. The Project IS/MND also includes analysis of those areas required by the federal cross-cutter. This analysis is included in Section 5.0 of this IS/MND.

1.3 Lead Agency

The lead agency is the public agency with primary responsibility over a proposed project. Where two or more public agencies will be involved with a project, CEQA Guidelines Section 15051 provides criteria for identifying the lead agency. In accordance with CEQA Guidelines Section 15051(b)(1), "the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose." Based on this criteria, the City is the lead agency for the Proposed Project.

1.4 Purpose and Document Organization

The purpose of this IS is to evaluate the potential environmental impacts of the Proposed Project. This document is divided into the following sections:

1.0 Introduction – This section provides an introduction and describes the purpose and organization of the document. This section provides general information regarding the Project, including the Project title, lead agency and address, contact person, brief description of the Project location, General Plan land use designation, zoning district, identification of surrounding land uses.

2.0 Project Description – This section provides a detailed description of the Proposed Project, as well as the identification of other public agencies whose review, approval, and/or permits may be required. Also listed in this section is a checklist of the environmental factors that are potentially affected by the Project.

3.0 Environmental Factors Potentially Affected and Determinations – This section is a summary of the environmental topic areas that were found to potentially impact the environment.

4.0 Environmental Checklist and Discussion – This section describes the environmental setting and overview for each of the environmental subject areas, evaluates a range of impacts classified as *no impact*, *less than significant impact*, *less than significant impact with mitigation incorporated*, and *potentially significant impact* in response to the environmental checklist.

5.0 Compliance with Federal Regulations – This section provides the required NEPA analysis for the Project.

6.0 Alternatives – NEPA requires an analysis of alternatives to the Project. This section provides this analysis.

7.0 List of Preparers – This section lists the names of documents preparers.

8.0 Bibliography – This section identifies documents, websites, people, and other sources consulted during the preparation of this Initial Study.

9.0 List of Attachments – This section provides a list of document appendices.

1.5 Project Location and Surrounding Land Uses

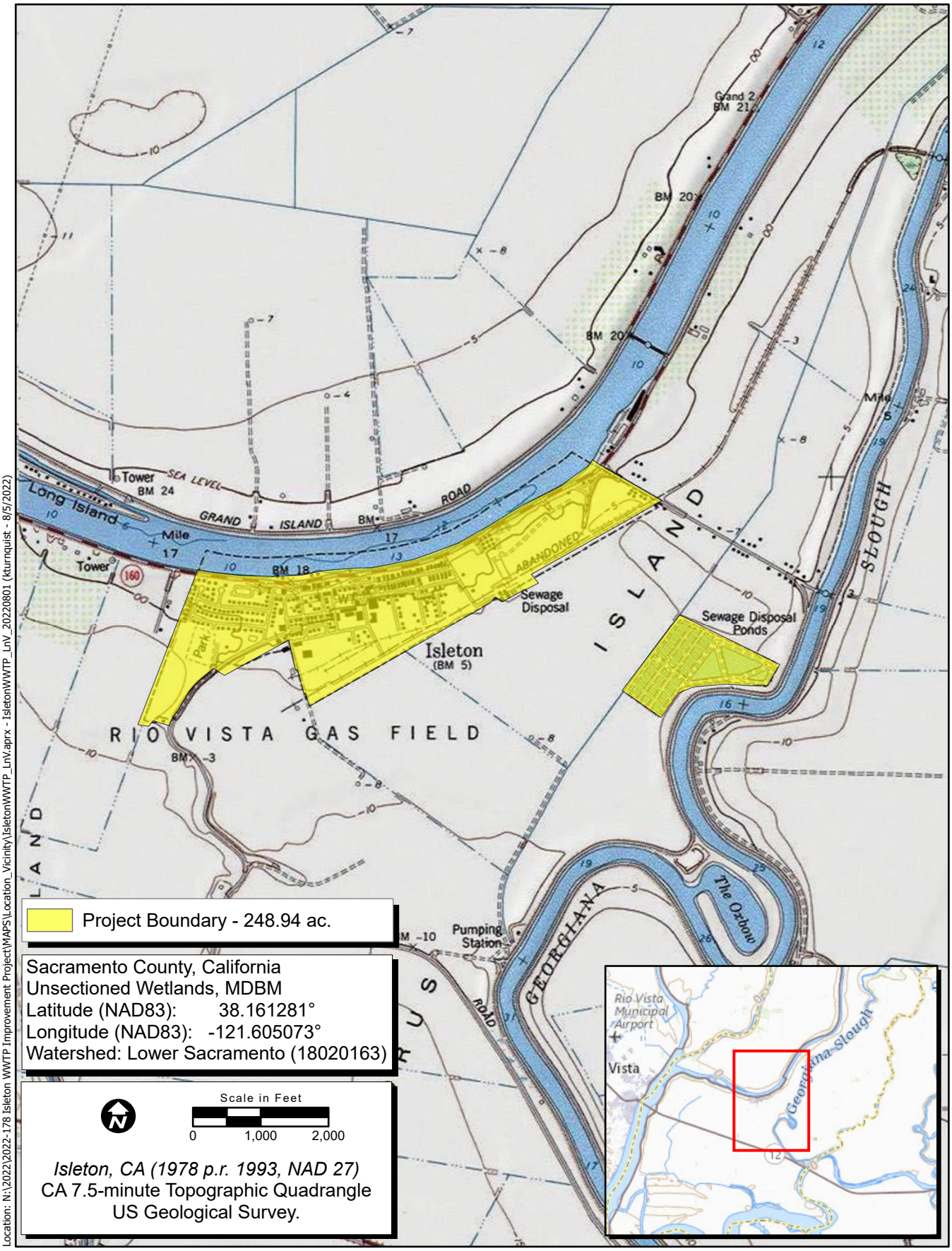
The Project area is located in the City of Isleton. The city boundaries cover approximately 0.4 square mile The city is directly south of the Sacramento River and approximately 0.6 mile north of Georgiana Slough. As illustrated in Figures 2a and 2b, the majority of the Proposed Project is located within the street ROW, except for approximately 690 feet that will occur within the City's utility easement on private land. The Project also includes the abandonment of two sewer lines on private property and storm drain improvements at the Isleton Mobile Home Park, reconnecting it to the City's storm drain system. Since the Project runs through the City, adjacent uses include single- and multifamily residential uses, mobile homes, churches, schools, commercial uses, and vacant lands. Agricultural uses surround the city and the WWTF.

1.6 Environmental Setting

Isleton is located in the southwestern portion of Sacramento County, adjacent to the Sacramento River. The City of Isleton is a small city with an estimated 2022 population of 780, 222 single-family homes, 109 multifamily units, and 56 mobile homes (California Department of Finance [DOF] 2022).

The topography of the Project Site is relatively flat, with elevations ranging from 10 feet Above Mean Sea Level (AMSL) at the Isleton Mobile Home Park to 4 feet below mean sea level (BMSL) at the City's wastewater treatment facilities. The average winter minimum temperature is 47.9 degrees Fahrenheit (˚F) and the average summer maximum temperature 73.9˚F; the average annual precipitation is approximately 13.22 inches (National Oceanic and Atmospheric Administration [NOAA] 2022).

The Project Site includes the Department of Public Works corps yard, constructed wastewater treatment ponds, and sections of road and housing throughout the City of Isleton. The developed portions of the Project Site include paved roadways, parking areas, residential homes, equipment storage buildings, an unmaintained baseball field, and a community park with ornamental trees. The wastewater treatment portion of the Project Site includes three large triangular constructed/excavated ponds, six disposal ponds, and gravel roads.



Map Date: 8/5/2022
Sources: ESRI, USGS

Figure 1. Project Location and Vicinity

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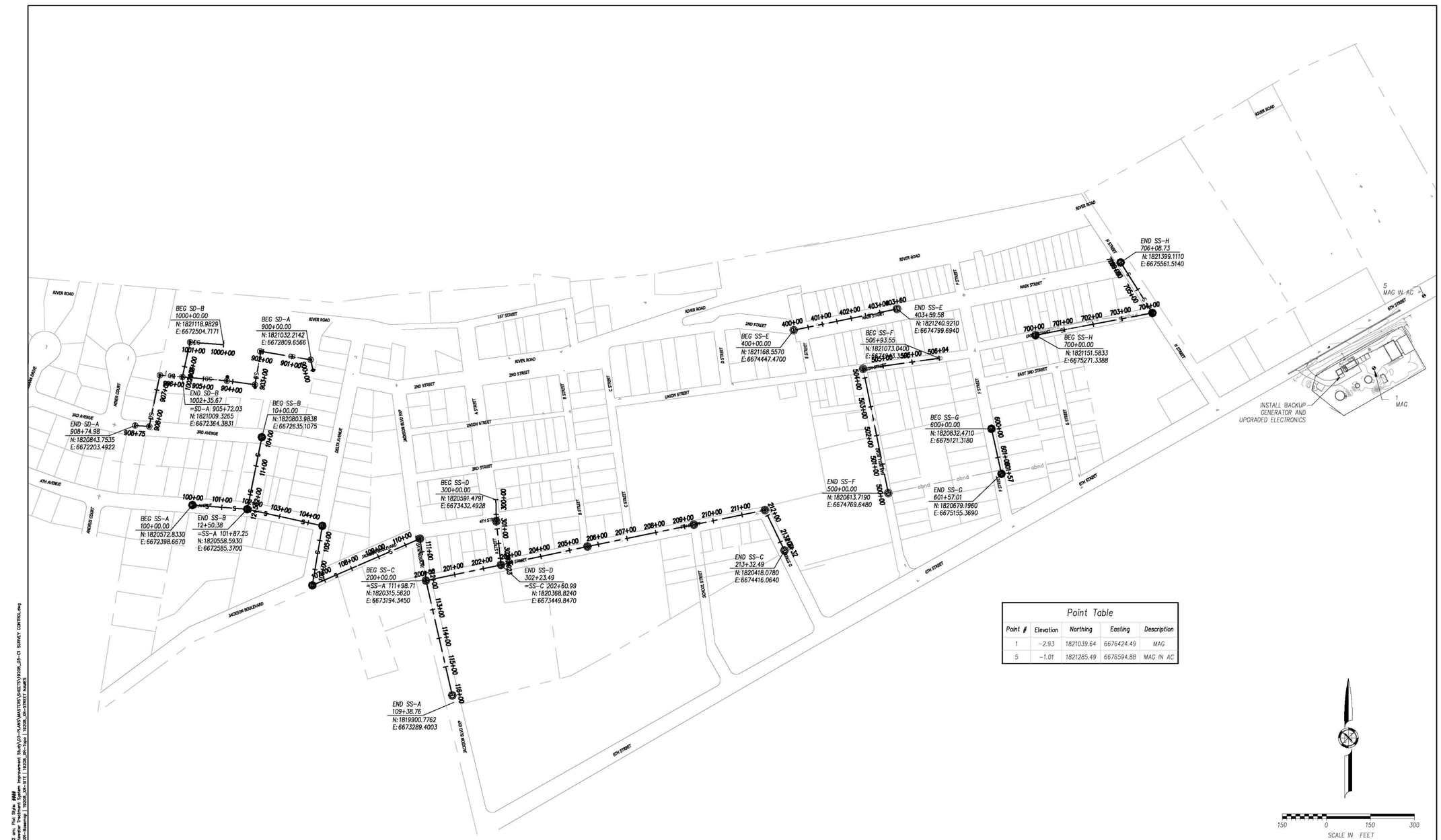
2022-178 Isleton WWTP Improvement Project



Point Table				
Point #	Elevation	Northing	Easting	Description
1	–2.93	1821039.64	6676424.49	MAG
5	–1.01	1821285.49	6676594.88	MAG IN AC

150 0 150 300
SCALE IN FEET

NO.	REVISIONS	BY	DATE
1			
2			
3			
4			
5			
6			

BENCH MARK ELEV : 26.5 DATUM : NAVD 88
DESCRIPTION :
HORIZONTAL DATUM: NAD 83 CALIFORNIA ZONE 2
VERTICAL DATUM: NAVD 88 AS ADJUSTED TO NGS PID JS1817 ELEVATION=26.5 FEET. TO ATTAIN THIS ELEVATION OF RECORD CITY OF ISLETON WASTEWATER TREATMENT PROJECT PLANS DATED 1973 SUBTRACT 1.85 FEET.

DESIGN BY :	A. HOLLADAY
DRAWN BY :	A. HOLLADAY
CHECKED BY :	D. HARDEN
SCALE :	1"=150'
DATE :	2/8/2023
PROJ NO. :	19208

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

30% SUBMITTAL
NOT FOR CONSTRUCTION
02/28/2023

BENEN
TRUSTED ENGINEERING ADVISORS

Bennett Engineering Services
1082 Sunrise Avenue, Suite 100
Roseville, California 95661
T 916.783.4100
F 916.783.4110

CITY OF ISLETON SANITARY SEWER IMPROVEMENT PROJECT

CITY WIDE SITE PLAN

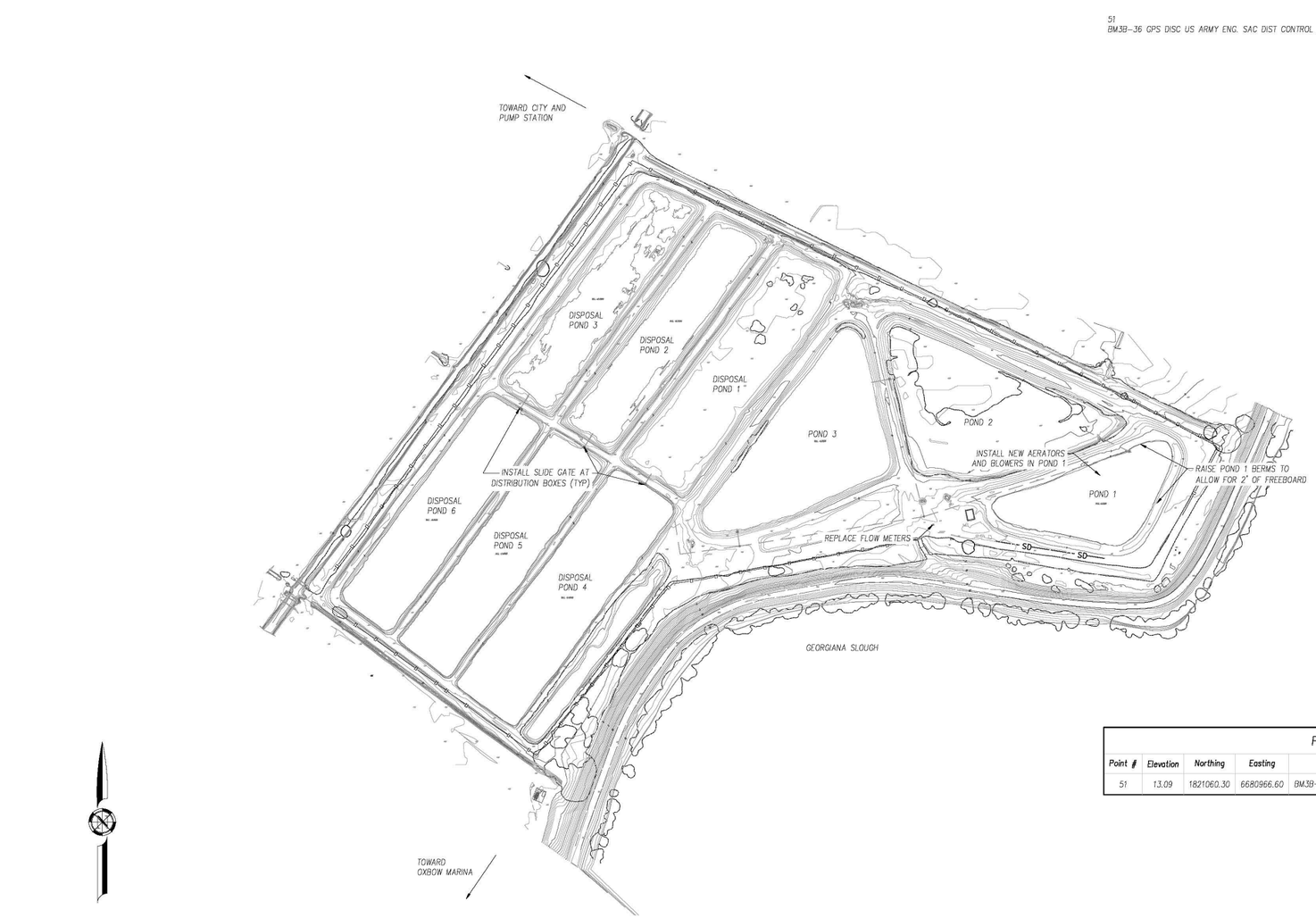
CITY OF ISLETON CALIFORNIA

C-1
3
OF
23

Login Name: jdrewe
Plot Date: February 06, 2023 – 9:52 am Plot Style: ###
File Name: X:\Proj\19208\Civil\Sheets\Improvement Study\C3-PLANS\MASTER\19208_LS3-C1 SURVEY CONTROL.dwg
Xrefs: X:\Proj\19208\Civil\Sheets\Improvement Study\C3-PLANS\MASTER\19208_LS3-C1 SURVEY CONTROL.dwg

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2a. City Wide Site Plan
2022-178 Isleton WWTP Improvement Project



Point Table				
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Login Name: jjohnsrud
Plot Date/Time: Aug 08, 2023 - 9:53 am Plot Style: ###
File Name: P:\Proj\19208_Isleton Wastewater Treatment Plant Improvement Study\03-PLANS\MASTERS\SHEETS\19208_03-01 SURVEY CONTROL.dwg
XREFs: BDR--19208_H_23x34 | 19208_00-Basemap | 19208_00-SITE | 19208_00-TOPO | 19208_05-STREET NAMES

NO.	REVISIONS	BY	DATE
1			
2			
3			
4			
5			

BENCH MARK ELEV : 26.5 DATUM : NAVD 88
DESCRIPTION :
HORIZONTAL DATUM: NAD 83 CALIFORNIA ZONE 2
VERTICAL DATUM: NAVD 88 AS ADJUSTED TO NGS PID JS1817 ELEVATION=26.5 FEET, TO ATTAIN THE ELEVATION OF RECORD CITY OF ISLETON WASTEWATER TREATMENT PROJECT PLANS DATED 1973 SUBTRACT 1.85 FEET.

DESIGN BY :	A. HOLLADAY
DRAWN BY :	A. HOLLADAY
CHECKED BY :	D. HARDEN
SCALE :	1"=100'
DATE :	2/8/2023
PROJ NO. :	19208

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

30% SUBMITTAL
NOT FOR CONSTRUCTION
02/28/2023

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CITY OF ISLETON SANITARY SEWER IMPROVEMENT PROJECT

WASTEWATER TREATMENT POND SITE PLAN

CITY OF ISLETON CALIFORNIA

C-2
4
OF
23

ECORP Consulting, Inc.
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Figure 2b. Wastewater Treatment Pond Site Plan
2022-178 Isleton WWTP Improvement Project

2.0 PROJECT DESCRIPTION

2.1 Project Characteristics

The Proposed Project includes sanitary sewer improvements, earthwork for raising pond berms, storm drain reconnections and equipment upgrades at the City's Wastewater Treatment Facility (WWTF, Figures 2a and 2b). The Proposed Project includes replacement of approximately 6,150 linear feet of wastewater gravity pipeline, abandonment of 660 linear feet of gravity sewer, 33 maintenance holes, and abandonment of 5,070 linear feet of wastewater gravity pipeline. Storm drain reconnections will include approximately 1,200 linear feet of new storm drain pipe, nine maintenance holes, and six drain inlet connections. Equipment upgrades at the WWTF will generally include installation of a new backup generator, new aerators, blowers and other required electrical equipment.

The sanitary sewer improvements and storm drain reconnections will occur in segments within the City limits. The City limits are bound on the east by West Tyler Island Bridge Road, on the south by 6th Street, on the north by the Sacramento River, and on the West by a canal west of Georgiana Court. Figures 2a and 2b provide the site plans for the Project.

The Project will abandon in place portions of the pipeline while removing other portions. Most of the construction will occur within the existing street ROW, with the exception of four segments. One segment of sanitary sewer replacement is within an easement that runs along private property from Third to Fourth avenues. One segment of storm drain installation is within an easement from the Isleton Mobile Home Park east of Miners Court south to Third Avenue. The remaining two segments are to be abandoned and run east from Gaswell Road to F Street and from F to G streets. It is anticipated that installation will be completed by open trenching, but pipe bursting or boring may be utilized in areas where work area is limited in easements.

Additionally, the Project includes the raising of the berm on Treatment Pond #1 in order to provide 2 feet of freeboard and maintain retention time in the pond for treatment. This would require the import of approximately 1,000 cubic yards of fill material from outside the City and Project Site. All the other ponds are not anticipated to need the berms raised with this project.

2.2 Employees and Construction

On average, there will be 10 employees at the Project Site while construction activities are occurring. Construction is anticipated to start in July 2025 and take approximately 150 days to complete.

The preferred method for installation will be open trenching. The trenches are anticipated to be on average 8 feet deep and 3 feet wide, sometimes reaching 12 feet in depth. All work will be completed pursuant to the County of Sacramento construction standards.

Approximately 2,000 cubic yards of import soil material will be required to complete the pipeline portion of the Project. This includes export of excavation from pipe zone and roadway material in the trench zone and the import of new aggregate base, asphalt concrete, and pipe bedding material. Most of the trench

material will be reused in the backfill of the trench. Additionally, the pond berm raising will require approximately 1,000 cubic yards of soil import.

2.3 Regulatory Requirements, Permits, and Approvals

The following approvals and regulatory permits would be required for implementation of the Proposed Project.

2.3.1 Lead Agency Approval

City of Isleton is the lead agency for the Proposed Project. In order to approve the Proposed Project, the Isleton City Council (Council) must first adopt the IS/MND, approve the Proposed Project, and file a Notice of Determination within 5 working days. The Council will consider the information contained in the IS/MND in making its decision to approve or deny the Proposed Project. The IS/MND is intended to disclose to the public the Proposed Project's details, analyses of the Proposed Project's potential environment impacts, and identification of feasible mitigation that will reduce potentially significant impacts to less than significant levels.

Other agency approvals are described below.

2.3.1.1 Central Valley Regional Water Quality Control Board (RWQCB)

The Regional Water Quality Control Board (RWQCB) typically requires that a Construction General Permit be obtained for projects that disturb more than 1 acre of soil. Typical conditions issued with such a permit include the submittal of and adherence to a Stormwater Pollution Prevention Plan (SWPPP), as well as prohibitions on the release of oils, grease, or other hazardous materials.

2.3.1.2 Sacramento Metropolitan Air Quality Management District

The Proposed Project is located in an area under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). The Project applicant may be required to obtain the SMAQMD's approval of a dust control plan prior to any soil-disturbing activities on the site, as well as an Authority to Construct and a Permit to Operate.

2.4 Relationship of Project to Other Plans and Projects

2.4.1 City of Isleton General Plan

The *City of Isleton 2000 General Plan* is the primary document governing land use development in the City. The General Plan provides a governing basis for all other plans and planning documents of the City and all codes, ordinances, and policies of the City related to land use change, transportation, environmental resources, infrastructure, and other related topics. The General Plan consists of the following elements: Community Development, which includes Land Use, Circulation, and Public Utilities; Resource Management; Hazard Management, which includes Safety; and Noise. Each element also has goals, policies, and implementation strategies to guide future land use and development decisions.

2.5 Consultation with California Native American Tribe(s)

Assembly Bill (AB) 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City has not received any Native American consultation requests. Further information on potential Tribal Cultural Resources (TCRs) in the Project Area is provided in Section 4.18 of this IS.

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3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

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

3.2 Determination

On the basis of this initial evaluation:

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

I find that although the Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. ☒

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

I find that the 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 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 Project, nothing further is required. ☐

Charles Bergson Digitally signed by Charles Bergson DN: cn=Charles Bergson, o=City of Isleton, ou=City Manager, email=cbergson@cityofisleton.com, c=US Date: 2023.02.22 15:32:36 -08'00'

Charles Bergson
City Manager

02/22/23
Date

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Isleton is located in the southwestern portion of Sacramento County on Brannon Island, within the Sacramento-San Joaquin River Delta, The City is directly adjacent to the Sacramento River. Isleton is a small city of approximately 0.4 square mile[1] and is dominated by the Sacramento River on the north, Georgiana Slough to the south and agriculture lands on the south, east, and west. The land in the city is predominately flat with exception to the area along the Sacramento River levee.

4.1.1.1 Visual Character of the Project Site

The Project includes the replacement of existing wastewater pipelines within the street ROW and sewer easement areas in multiple locations within the City. The topography of the Project Site is relatively flat, with elevations ranging from 10 feet AMSL at the Isleton Mobile Home Park to 4 feet BMSL at the City's WWTF. Visual character of the site varies from single-family neighborhoods and a mobile home park to public school facilities to commercial uses along Main Street. The Project would have no effect on the visual character of Isleton as the Project would involve the replacement of existing underground wastewater pipelines, the reconnection of a storm drain pipeline at the Mobile Home Park, improvements to the City's WWTF (e.g., a new backup generator, new aerators, blowers and other electrical equipment), and the raising of the berm on treatment pond #1 all of which are in the City ROW and easements.

4.1.1.2 State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. The California Scenic Highway Program has officially designated State Route (SR) 160 from just north of Consumnes River Boulevard in Sacramento to the Antioch Bridge. The 35-mile roadway section includes SR 160 as it passes through the City (California Department of Transportation [Caltrans] 2022).

[1] Source: U.S. Census 2018.

4.1.2 Lighting

Individuals have a range of reactions to the perceived effects of lighting on the environment. As such, whether light is obtrusive is generally based on perception, but is also a function of the actual amount of light emitted from a source. The following are examples of light levels, expressed in foot-candles (fc):[2]

Direct sunlight - 10,000	Covered parking lot - 5
Full daylight - 1,000	Gas station canopy - 12.5
Twilight - 1	Department store - 40
Full moon - 0.1	Grocery store – 50

Typical nighttime street lighting requirements are 1 to 3 fc, which is generally considered to be unobtrusive. A typical example of glare effects is the car headlight. Vision is impaired when viewed directly in front of a vehicle with the headlights on full beam, resulting in disabling glare; however, the same headlights would not impair vision when viewed from the side.

4.1.2.1 Spill Light

Spill light or light trespass is the light that illuminates surfaces beyond the property line. Typically, spill lighting is from a more horizontal source such as streetlights and way-finding/security lighting than sky glow, which emanates from a more vertical source into the atmosphere. Spill light can be accurately calculated, and the effects of spill light can be measured for general understanding and comparison. However, light that is considered to be obtrusive is a subject of debate. A spill light impact is generally considered significant if the increase in spill lighting would exceed 1 fc at the property line of the nearest sensitive receptor, sky glow is perceptibly increased, or glare is at a level such that it impairs vision.

4.1.2.2 Sky Glow

Sky glow is the light that illuminates the sky above the horizon and reflects off of moisture and other tiny atmospheric particles. Sky glow would be considered a significant impact if it were a permanent addition to the environment. Control features are available on the light sources to reduce sky glow and glare from nighttime lighting. These control features direct light downward, thereby reducing the spill of light that causes sky glow and reducing glare.

[2] Foot-candle (fc): A unit of measure of the intensity of light falling on a surface, equal to one lumen per square foot and originally defined with reference to a standardized candle burning at one foot from a given surface. One fc = 0.01609696 watts. Source: Engineering Toolbox, n.d.

4.1.2.3 Glare

Glare can be described as direct or reflected light, which can then result in discomfort or disability. A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive offsite glare.

4.1.3 Aesthetics (I) Environmental Checklist and Discussion

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?	☐	☐	☐	☒

No Impact.

The *City of Isleton 2000 General Plan* neither identifies any scenic vistas nor provides any policies for the protection of scenic vistas. No feature of the Proposed Project would be greater than ground height. The Project would not block views of any scenic vistas. As such, the Project would have no impact on a scenic vista.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No Impact.

The Proposed Project is located within the vicinity of an officially designated scenic highway (SR 16). However, no construction/sewer replacement projects would occur as a part of the Project on this roadway where it passes through the City. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In a non-urbanized area substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒

No Impact.

The Project is the replacement of existing wastewater pipelines, reconnection of existing storm drain facilities and a new backup generator, new aerators, blowers and other electrical equipment upgrades at the WWTF. With the exception of the new backup generator, other electrical equipment upgrades and raising of the berm on Treatment Pond #1 at the WWTF, all Project improvements would be completed underground or at ground surface. Upon Project completion, the only visual indication that this improvement has been done would be the new generator and new asphalt strips on the city streets. These improvements would not conflict with applicable zoning and other regulations governing scenic quality in the City. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

No Impact.

The Project would involve the replacement of existing underground wastewater pipelines within the street ROW and sewer easement areas, the reconnection of a storm drain pipeline at the RV Park, and improvements to the City's WWTF (i.e., new backup generator, new aerators, blowers and other electrical equipment). The Project would not include new sources of light or glare with these improvements. The Project would have no impact in this area.

4.1.4 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories comprised of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The California DOC manages an interactive website, the California Important Farmland Finder. This website program identifies the Project site as being within an area of Urban and Built-Up Land and Other Land (DOC 2022a).

There are no farming activities in the site as the Project Area is located within the Isleton street ROWs and urban built areas.

The Project site is within the City of Isleton and does not contain possible forest or timber resources.

4.2.2 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

	Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

No Impact.

The DOC identifies the Project Site as Urban and Built-Up Land and Other Land. Because the Project involves the replacement of underground wastewater facilities, reconnection of existing drainage facility and minor improvements to the WWTF, the Project would have no effect on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. As such, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland). The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No Impact.

This site is not subject to a Williamson Act contract. There are no Williamson Act contract lands within the vicinity of the Project Site. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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))?	☐	☐	☐	☒

No Impact.

The Project site is located in a developed area of the City of Isleton and is not located in a forestland protection or timber production area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact.

There are no identified forest lands on the Project site or within the vicinity of the Project. The Project would have no impact in this area.

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact.

The Project site is identified as Urban and Built-Up Land and Other Land by DOC. the Project is the replacement of existing wastewater infrastructure and would not extend to those areas under existing agricultural use. There is no forest land within the Project vicinity. The Project would have no impact in this area.

4.2.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.3 Air Quality

The following information was provided by the *Isleton Wastewater Treatment System Improvement Project – Emissions Memorandum* completed by ECORP Consulting, Inc. (2022a). This document is included as Appendix A of this IS.

4.3.1 Environmental Setting

The Project Site is located within Sacramento County in the City of Isleton. The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Proposed Project is located in the Sacramento Valley Air Basin (SVAB). The air basin is relatively flat, bordered by mountains to the east, west, and north and by the San Joaquin Valley to the south. Hot, dry summers and mild, rainy winters characterize the Mediterranean climate of the Sacramento Valley.

Both the USEPA and CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called criteria pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are Ozone (O_3), Carbon Monoxide (CO), Particulate Matter (PM), Oxides of Nitrogen (NO_x), Sulfur Dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Sacramento County region is designated as a nonattainment area for the federal O_3 and $PM_{2.5}$ (PM less than 2.5 microns in diameter) standards and is also a nonattainment area for the state standards for O_3 and PM_{10} (PM less than 10 microns in diameter) (CARB 2019).

The SMAQMD is the air quality regulating authority in Sacramento County. The agency's primary responsibility is ensuring that the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are attained and maintained in the Sacramento County portion of the SVAB. The SMAQMD coordinates the work of government agencies, businesses, and private citizens to achieve and maintain healthy air quality for the Sacramento area. The SMAQMD develops market-based programs to reduce emissions associated with mobile sources, processes permits, ensures compliance with permit conditions and with SMAQMD rules and regulations, and conducts long-term planning related to air quality. The SMAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities.

The following is a list of noteworthy SMAQMD rules that are required of construction and operational activities associated with the Proposed Project:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the SMAQMD early to determine if a permit is required, and to begin the permit application process. Other general types of uses that require a permit include, but are not limited to, dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine over 50 horsepower is required to have a SMAQMD permit or a CARB portable equipment registration.

Rule 402: Nuisance. The purpose of this rule is to limit emissions which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

Rule 403: Fugitive Dust. The purpose of this rule is to require that reasonable precautions be taken so as not to cause or allow the emissions of fugitive dust from non-combustion sources from being airborne beyond the property line from which the emission originates.

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

No Impact.

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the NAAQS and CAAQS. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project Site is located within the Sacramento County portion of the SVAB, which is under the jurisdiction of the SMAQMD. The SMAQMD is required, pursuant to the federal Clean Air Act (CAA), to reduce emissions of criteria pollutants for which the SVAB is in nonattainment. The SMAQMD is required to submit air quality plans and rate-of-progress milestone evaluations in accordance with the CAA. The SMAQMD air quality attainment plans and reports, which include the *2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2018), the *PM_{10} Implementation/Maintenance Plan and Re-Designation Request* (2010), and *$PM_{2.5}$ Implementation/Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area* (2013), present comprehensive strategies to reduce the O3 precursor pollutants (Reactive Organic Gases [ROGs] and NOx) as well as PM emissions from stationary, area, mobile, and indirect sources. These air quality plan and their associated emission-reducing control measures are based on information derived from projected growth in Sacramento County in order to project future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Sacramento County and the incorporated cities in the county, including the City of Isleton. As such, projects that propose development consistent with the growth anticipated by the respective general plan of the jurisdiction in which the proposed development is located would be consistent with SMAQMD air quality planning. In the event that a project would propose a development that is less dense than that associated with the general plan, the project would likewise be consistent with the SMAQMD air quality plans. If a project, however, proposes a development that is denser than that assumed in the general plan, the project may be in conflict with SMAQMD air quality planning efforts and could therefore result in a significant impact on air quality.

Growth projections for the County in the Project area are based on the *City of Isleton General Plan*. As such, projects in the City that propose development consistent with the growth anticipated by the General Plan would be consistent with SMAQMD's air quality planning efforts. The Project does not include

development of new housing or employment centers and would not induce population or employment growth. Rather, the Project proposes upgrades to the City of Isleton wastewater treatment system for the purpose of accommodating existing wastewater flows. Therefore, the Project would not affect local plans for population growth and the Proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of SMAQMD air quality planning efforts. Furthermore, as described in detail below, the Project would not exceed the SMAQMD's short-term construction or long-term operational thresholds and, in turn, would not violate any air quality standards, and thus would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact.

According to the SMAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. As shown in Table 4.3-1, the SMAQMD has established thresholds of significance for air quality pertaining to construction and operational activities of land use development projects such as that proposed.

Table 4.3-1. SMAQMD Significance Thresholds

Air Pollutant	Construction Activities		Operations
Reactive Organic Gas	-		65 pounds/day
Nitrogen Oxide	85 pounds/day		65 pounds/day
Carbon Monoxide	-		-
Sulfur Oxide	-		-
Coarse Particulate Matter PM_{10}	80 pounds/day (If all feasible BACT/BMP applied)	14.6 tons/year	80 pounds/day (If all feasible BACT/BMP applied)
Fine Particulate Matter $PM_{2.5}$	82 pounds/day (If all feasible BACT/BMP applied)	15 tons/year	82 pounds/day (If all feasible BACT/BMP applied)

Source: SMAQMD 2020a
Notes: BACT = Best Available Control Technology; BMPs = Best Management Practices

As shown, the SMAQMD has established both daily and annual significance thresholds for the generation of the O_3 precursors, ROGs, and NO_x. Additionally, SMAQMD states that projects generating less than 80 pounds of PM_{10} daily and 14.6 tons annually; and less than 82 pounds of $PM_{2.5}$ daily and 15 tons annually, while also implementing SMAQMD's Basic Construction Emission Control Practices, known as Best Management Practices (BMPs) are considered less than significant.

4.3.2.1 USEPA Conformity Determination Thresholds

General Conformity ensures that the actions taken by federal agencies do not interfere with a state's plans to attain and maintain national standards for air quality.

Established under the CAA (Section 176(c)(4)), the General Conformity rule plays an important role in helping states improve air quality in those areas that do not meet the NAAQS. Under the General Conformity rule, federal agencies must work with state and local governments in a nonattainment or maintenance area to ensure that federal actions conform to the air quality plans established in the applicable state or tribal implementation plan. The overall purpose of the General Conformity rule is to ensure that:

federal activities do not cause or contribute to new violations of NAAQS;

actions do not worsen existing violations of the NAAQS; and

attainment of the NAAQS is not delayed.

The General Conformity process begins with an *applicability analysis*, whereby it must be determined how and to what degree the Conformity Rules apply. According to USEPA's General Conformity Guidance: Questions and Answers (1994), before any approval is given for a Federal Action to go forward, the federal agency must apply the applicability requirements found at 40 Code of Federal Regulations (CFR) Section 93.153 to the Federal Action and/or determine on a pollutant-by-pollutant basis, whether a determination of General Conformity is required. During the applicability analysis, the federal agency determines the following:

Whether the action will occur in a nonattainment or maintenance area

Whether one or more of the specific exemptions apply to the action

Whether the federal agency has included the action on its list of presumed-to-conform actions

Whether the total direct and indirect emissions are below or above the de minimis levels; and/or

Where a facility has an emissions budget approved by the State or Tribe as part of the State Implementation Plan or Tribal Implementation Plan, the federal agency determines that the emissions from the proposed action are within the budget.

The General Conformity Rule allows for exemptions for emissions that are not reasonably foreseeable, will not result in an increase in emissions, are below *de minimis* limits, are the result of emergency actions, are included in stationary source air permits, are for routine maintenance and repair of existing structures, or

are included in a transportation conformity determination undertaken by Federal Highway Administration (FHWA) or Federal Transit Administration (FTA, 40 CFR 93.153(c)).

A conformity determination would be required if the annual emissions of non-attainment pollutants generated by the Proposed Project were to exceed the General Conformity *de minimis* thresholds. The *de minimis* limits represent a level of emissions that the USEPA has determined will have only *de minimis* impacts to the air quality of an area and are thus exempted from the General Conformity Rule. If the overall predicted increase in emissions of a criteria pollutant due to a federal action in a nonattainment area exceeds the *de minimis* limits as shown in Table 4.3-2, the lead federal agency is required to make a conformity determination. As previously described, the Project Site is located in the Sacramento County portion of the SVAB. Table 4.3-2 lists the attainment status for each criteria air pollutant and the *de minimis* threshold based on the NAAQS designation and classification.

Table 4.3-2. Federal General Conformity *De Minimis* Emissions Levels in Sacramento County

Pollutant	Attainment Status	Classification	USEPA General Conformity Threshold (tons/year)
VOC (O_3 precursor)	Nonattainment	Serious	50
NO_x (O_3 precursor)	Nonattainment	Serious	50
PM_{10}	Attainment	Maintenance	100
$PM_{2.5}$	Nonattainment	Moderate	100
CO	Unclassified/Attainment	Maintenance	100
NO_2	Unclassified/Attainment	N/A	100
Lead	Unclassified/Attainment	N/A	25
SO_2	Unclassified/Attainment	N/A	100

Source: CARB 2019; USEPA 2020

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Construction Impacts

Emissions associated with Project construction would be temporary and short-term but have the potential to represent a significant air quality impact. Two basic sources of short-term emissions will be generated through Project construction: operation of the heavy-duty equipment (i.e., excavators, loaders, haul trucks) and the creation of fugitive dust during clearing and grading. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate

exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SMAQMD Rule 403, which, as previously described, requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water and limiting vehicle speeds, where possible, for control of dust during the clearing of land and other construction activities.

Construction-generated emissions associated the Proposed Project were calculated using the Roadway Construction Emissions Model (RCEM), version 9.0.0. RCEM is a spreadsheet-based model that is able to estimate exhaust emissions from heavy-duty construction equipment, haul trucks, and worker commute trips as well as fugitive dust from the construction of a new roadway, road widening, roadway overpass, levee or pipeline projects. Appendix A provides more information regarding the construction assumptions used in this analysis, including construction equipment and duration.

Predicted maximum daily emissions attributable to Project construction are summarized in Table 4.3-3. Such emissions are short-term and of temporary duration, lasting only as long as Project construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SMAQMD's thresholds of significance.

Table 4.3-3. Construction-Related Emissions

Construction Year	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Daily (pounds per day)						
Construction	3.73	41.73	39.01	0.14	6.41	2.46
SMAQMD Daily Significance Threshold	-	*85 pounds/ day*	-	-	*80 pounds/day If all feasible BACT/BMP applied)*	
Exceed SMAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual (tons per year)						
Construction	0.1	1.5	1.5	0.0	0.2	0.1
SMAQMD Annual Significance Threshold	-	-	-	-	*14.6 tons/year*	*15 tons/year*
Exceed SMAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: RCEM version 9.0.0. Refer to Appendix A for Model Data Outputs.
Notes: Emission calculations account for the import of 3,000 cubic yards of soil, export of 2,000 cubic yards of soil, import of 2,000 cubic yards of asphalt material and export of 2,000 cubic yards of asphalt material during Project implementation.

As shown in Table 4.3-3, emissions generated during Project construction would not exceed the SMAQMD's daily or annual thresholds of significance with the implementation of Basic Construction Emission Control Practices, known as BMPs. To ensure implementation of BMPs during Project construction, SMAQMD requires standard BMPs. These are included as Mitigation Measure AQ-1 and are required. With implementation of Mitigation Measure AQ-1, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable federal or state ambient air quality standard. Since the Project's emissions do not exceed SMAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no regional health effects from Project criteria pollutants would occur.

4.3.2.2 USEPA Conformity Determination Analysis

As previously described, the Project Site is located in the Sacramento County portion of the SVAB and is in nonattainment for federal O_3 and $PM_{2.5}$ standards. Emissions generated during Project implementation would be short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the Conformity Determination thresholds.

Table 4.3-4. Construction-Related Emissions (USEPA Conformity Determination Analysis)

Construction Year	Pollutant (tons per year)					
	VOC (ROG)	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction	0.1	1.5	1.5	0.0	0.2	0.1
USEPA Conformity Determination Thresholds (40 CFR 93.153)	*50*	*50*	*100*	*100*	*100*	*100*
Exceed USEPA Conformity Determination Thresholds?	**No**	**No**	**No**	**No**	**No**	**No**

Source: RCEM version 9.0.0. Refer to Appendix A for Model Data Outputs.
Notes: Emission calculations account for the import of 3,000 cubic yards of soil, export of 2,000 cubic yards of soil, import of 2,000 cubic yards of asphalt material and export of 2,000 cubic yards of asphalt material during Project implementation.

As shown in Table 4.3-4, emissions from implementation of the Proposed Project do not exceed the USEPA Conformity Determination thresholds for the region.

Operational Impacts

Operational emissions impacts are long-term air emissions impacts that are associated with any changes in the permanent use of the Project Site by onsite stationary and offsite mobile sources that substantially increase emissions. The Project proposes necessary upgrades to the City of Isleton's Wastewater Treatment System. Once upgrades are complete it would not be a greater source of operational emissions

beyond current conditions. Therefore, Proposed Project operations would not contribute to on- or offsite emissions.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Less Than Significant Impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The Project Site spans many different locations throughout Isleton, which is primarily made up of sensitive residential receptors. Virtually all aspects of Project implementation would involve construction activity occurring adjacent to these land uses.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of Diesel Particulate Matter (DPM), ROG, NO_x, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); paving; and other miscellaneous activities. The Sacramento County portion of the SVAB is listed as a nonattainment area for the federal O_3 and $PM_{2.5}$ standards and is also a nonattainment area for the state standards for O_3 and PM_{10}. Thus, existing O_3, PM_{10} and $PM_{2.5}$ levels in the SVAB are at unhealthy levels during certain periods. However, as previously demonstrated, the Project would not exceed the SMAQMD significance thresholds.

The health effects associated with O_3 are generally associated with reduced lung function. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the SMAQMD thresholds, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the SMAQMD thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat,

aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary Toxic Air Contaminant (TAC) of concern. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the SMAQMD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

Operational Air Contaminants

Operation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the operations of the Project; nor would the Project attract mobile sources that spend long periods queuing and idling at the site. Thus, by its very nature, the Project would not be a source of TAC concentrations post-construction.

4.3.2.3 Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or *hot spots*, are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SVAB is designated as in attainment. Detailed modeling of Project-specific CO hot spots is not necessary and thus this potential impact is addressed qualitatively.

A CO hot spot would occur if an exceedance of the state 1-hour standard of 20 Parts Per Million (ppm) or the 8-hour standard of 9 ppm were to occur. The analysis prepared for CO attainment in the South Coast Air Quality Management District's (SCAQMD) *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the 2003 AQMP can be used to demonstrate the potential for CO exceedances of these standards. The

SCAQMD is the air pollution control officer for much of Southern California. The SCAQMD conducted a CO hot spot analysis as part of the *1992 CO Federal Attainment Plan* at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). In order to establish a more accurate record of baseline CO concentrations affecting the Los Angeles, a CO hot spot analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This hot spot analysis did not predict any violation of CO standards. The highest 1-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest 8-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway. Thus, there was no violation of CO standards.

Similar considerations are also employed by other air districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District, the air pollution control officer for the San Francisco Bay Area, concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

The Proposed Project is not anticipated to result in additional daily traffic trip once construction is complete. Thus, the Proposed Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or 44,000 vehicles per day) and the Project would not affect Level of Service (LOS) on any roadways. There is no likelihood of the Project traffic exceeding CO values.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less Than Significant Impact.

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same

odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word *strong* to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors. The installed pipe would not emit odors.

4.3.3 Mitigation Measures

AQ-1: Implement SMAQMD Basic and Enhanced Construction Emission Control Practices to Reduce Fugitive Dust.

The implementing agency will require the construction contractor(s) to implement basic and enhanced control measures to reduce construction-related fugitive dust as a standard or specification of their contract. Although the following measures are outlined in the Sacramento Metropolitan Air Quality Management District's CEQA guidelines, they are required for the entirety of the construction area. The implementing agency will ensure, through contract provisions and specifications, that the contractor adheres to the mitigation measures before and during construction and documents compliance with the adopted mitigation measures.

- Water all exposed surfaces two times daily. Exposed surfaces include (but are not limited to) soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

- Cover or maintain at least 2 feet of freeboard space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour.
- All roadway, driveway, sidewalk, and parking lot paving should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes (required by CCR, Title 13, sections 2449[d][3] and 2485). Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *The City of Isleton Planning Department and construction lead*

4.4 Biological Resources

The following information was provided by the Biological Resource Assessment (BRA) completed by ECORP Consulting, Inc. (2022b). This document is included as Appendix B of this IS.

4.4.1 Environmental Setting

The approximately 34.17-acre Study Area for biological resources is located in the City of Isleton, in Sacramento County, California (Figure 3). The Study Area is located on developed and semi-developed property in the City of Isleton and is situated at an elevation of approximately 3 feet AMSL in the Sacramento Valley subregion of the Great Central Valley region of California (ECORP 2022b). The average winter minimum temperature is 47.9 ˚F and the average summer maximum temperature 73.9˚F; the average annual precipitation is approximately 13.22 inches (NOAA 2022).

The Study Area includes the Department of Public Works corps yard, constructed wastewater treatment ponds, Wilson Park, Isleton Community Baseball Field, and sections of road and housing throughout the City of Isleton. The developed portions of the Study Area include paved roadways, parking areas, residential homes, equipment storage buildings, an unmaintained baseball field, community park with ornamental trees. The wastewater treatment portion of the Study Area includes three large, triangular constructed/excavated ponds and gravel roads.

Map Contents

Project Boundary - 34.17 ac.

Sources: Esri, MAXAR (20210411)

Location: N:\2022\2022-178 Isleton WWTP Improvement Project\MAPS\Aerial_Maps\IsletonWWTP Aerial Maps aprx - IsletonWWTP Project Components 20220829 (kturnquist - 8/29/2022)

Map Date: 8/29/2022

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 400 800

Figure 3. Study Area for Biological Resources

2022-178 Isleton WWTP Improvement Project

4.4.2 Land Cover Types and Vegetation Communities

Land cover types or vegetation communities found within the Study Area included ruderal grassland, paved/developed, and constructed wastewater treatment ponds. Descriptions of the land cover types, and vegetation communities present within the Study Area are provided below.

4.4.2.1 Ruderal Grassland

The ruderal grassland community was found between the buildings of the corps yard, along the roadsides of the wastewater treatment ponds, and within the unmaintained baseball field. These areas are dominated by nonnative ruderal plants such as Bermuda grass (*Cynodon dactylon*) and field bindweed (*Convolvulus arvensis*) with scattered patches of bristly oxtongue (*Helminthotheca echioides*), medusahead grass (*Elymus caput-medusae*), prickly lettuce (*Lactuca serriola*), and Italian ryegrass (*Festuca perennis*).

The ruderal grassland most resembles the *Crypsis spp. – Paspalum spp*. Herbaceous Semi-Natural Alliance as characterized by the *Manual of California Vegetation*. Semi-natural alliances are strongly dominated by nonnative plants that have become naturalized in the state, do not have state rarity rankings, and are not considered sensitive natural communities by California Department of Fish and Wildlife (CDFW, ECORP 2022b).

4.4.2.2 Paved/Developed

Paved, developed portions of the Study Area are characterized by existing paved roads and parking areas, compacted dirt/gravel parking areas, and residential homes/yards. The majority of the dirt/gravel roads and paths are unvegetated.

4.4.2.3 Wastewater Treatment Ponds

The wastewater treatment ponds are manmade ponds surrounded by gravel and dirt-surfaced access roads. A description of these features are provided in Section 4.4.3.1.

4.4.3 Aquatic Resources

A preliminary aquatic resource assessment was conducted for the Study Area as part of the reconnaissance-level survey. A formal aquatic resources delineation in accordance with the *Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* has not been conducted (ECORP 2022b).

No wetlands were observed during this assessment. The only aquatic resources present within the Study Area include the constructed wastewater treatment ponds within the existing City WWTF.

4.4.3.1 Other Waters/Non-Wetland Waters

Wastewater Treatment Ponds

The wastewater treatment ponds are located within the City WWTF, west of the Georgiana Slough. The wastewater treatment ponds are constructed/excavated ponds located between access roads. Upland and emergent wetland vegetation grow along the edges of the filled ponds. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of federal Clean Water Act (CWA), are typically not Waters of the U.S. or State. The U.S. Army Corps of Engineers (USACE) and RWQCB will make the final determination on the jurisdictional status of the wastewater treatment ponds.

4.4.4 Wildlife Observations

The Study Area supports a variety of common wildlife species. A detailed list of wildlife species observed in the vicinity of the Study Area during the site visit is included as Appendix C of the BRA.

4.4.5 Evaluation of Species Identified in the Literature Search

A complete list of all of the special-status plant and wildlife species identified in the literature search as potentially occurring within the Study Areas is provided in Table 1 of the BRA (Appendix B). This table includes the listing status for each species, a brief habitat description, and a determination on the potential to occur in or near the Study Area. Those species that have a reasonable potential to occur at or near the Project Site based on current site conditions and habitat characteristics is shown in Table 4.4-1. A brief description of each species follows the table.

Several species and sensitive habitat types that came up in the database and literature searches have been formally delisted, are tracked by the California Natural Diversity Database 9CNDDB) but possess no special status or are identified as sensitive habitats but not located within the Study Area. These species and habitat types were not included in Table 4.4-1 and are not discussed further.

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
Plants						
Mexican mosquito fern *(Azolla microphylla)*	–	–	4.2	Marshes and swamps, ponds or slow-moving bodies of water (100'–330').	August	Potential to occur. The wastewater treatment pond may provide suitable habitat.
Watershield *(Brasenia schreberi)*	–	–	2B.3	Freshwater marshes and swamps (100'–7,220').	June–September	Low potential to occur. The wastewater treatment pond may provide

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
						marginally suitable habitat.
Bristly sedge *(Carex comosa)*	–	–	2B.1	Mesic (Jepson eFlora) valley and foothill grassland, coastal prairie, and lake margins of marshes and swamps (0'–2,050').	May–September	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Parry's rough tarplant *(Centromadia parryi* ssp. *rudis)*	–	–	4.2	Alkaline, vernally mesic areas, and seeps in valley and foothill grassland and vernal pools, sometimes found on roadsides (0'–330').	May–October	Low potential to occur. The roadsides and other vegetation-supporting disturbed areas may provide marginally suitable habitat.
Bolander's water-hemlock *(Cicuta maculata* var. *bolanderi)*	–	–	2B.1	Coastal, fresh, or brackish marshes and swamps (0'–655').	July–September	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
San Joaquin spearscale (*Extriplex joaquinana*)	–	–	1B.2	Alkaline soils in chenopod scrub, meadows seeps, playas, and valley and foothill grassland (5'–2,740').	April–October	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Woolly rose-mallow *(Hibiscus lasiocarpos* var. *occidentalis)*	–	–	1B.2	Marshes and freshwater swamps. Often in riprap on sides of levees (0'–395').	June–September	Low potential to occur. The edges of wastewater treatment ponds may provide

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
						marginally suitable habitat.
Delta tule pea (*Lathyrus jepsonii* var. *jepsonii)*	–	–	1B.2	Freshwater and brackish marshes and swamps (0'–15').	May–July	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Legenere *(Legenere limosa)*	–	–	1B.1	Various seasonally inundated areas including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages (5'–2,885').	April–June	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Heckard's pepper-grass *(Lepidium latipes* var. *heckardii)*	–	–	1B.2	Alkaline flats within valley and foothill grasslands (5'–655').	March–May	Low potential to occur. The grassland may provide marginally suitable habitat.
Mason's lilaeopsis *(Lilaeopsis masonii)*	–	CR	1B.1	Brackish or freshwater marshes or swamps and riparian scrub (0'–35').	April–November	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Delta mudwort (*Limosella australis*)	–	–	2B.1	Usually mud banks in freshwater or brackish marshes and swamps and riparian scrub (0'–10').	May–August	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
Eel-grass pondweed *(Potamogeton zosteriformis)*	–	–	2B.2	Assorted freshwater marshes and swamps (0'–6,105').	June–July	Low potential to occur. The wastewater treatment ponds may provide marginally suitable habitat.
Sanford's arrowhead *(Sagittaria sanfordii)*	–	–	1B.2	Shallow marshes and freshwater swamps (0'–2,135').	May–October	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Marsh skullcap (*Scutellaria galericulata*)	–	–	2B.2	Mesic areas in lower montane coniferous forest, meadows and seeps, and marshes and swamps (0'–6,890').	June–September	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Side-flowering skullcap *(Scutellaria lateriflora)*	–	–	2B.2	Mesic areas in meadows and seeps and marshes, and swamps (0'–1,640').	July–September	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Suisun Marsh aster (*Symphyotrichum lentum*)	–	–	1B.2	Brackish and freshwater marshes and swamps (0'–10').	May–November	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
Saline clover *(Trifolium hydrophilum)*	–	–	1B.2	Marshes and swamps, mesic and alkaline areas in valley and foothill grassland,, and vernal pools (0'–985').	April–June	Low potential to occur. The edges of wastewater treatment ponds may provide marginally suitable habitat.
Reptiles						
Northwestern pond turtle (*Actinemys marmorata*)	-	-	SSC	Requires basking sites and upland habitats up to 0.5 kilometers from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April-September	Potential to occur. The wastewater treatment ponds may provide suitable habitat.
Giant garter snake (*Thamnophis gigas*)	FT	CT	-	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range.	April-October	Low Potential to occur. The wastewater treatment ponds may provide marginally suitable habitat.
Birds						
Clark's grebe *(Aechmophorus clarkii)*	-	-	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation.	June-August (breeding)	Low Potential to occur. There is no breeding habitat but the wastewater treatment ponds onsite supports marginal wintering habitat.
Great blue heron (*Ardea herodias*)	-	-	CNDDB	Colonial nester; prefers to nest in vegetation on islands or in swamps but may also be found in upland habitats in trees, bushes, on the ground and on artificial structures. Foraging	February-July	Potential to occur. There is no suitable nesting habitat onsite and no rookeries were found during the site visit.

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
				habitat is widely diverse and includes swamps, coastlines, estuaries, beaches, pastures, cultivated fields, and riparian areas.		However, the wastewater treatment ponds onsite represent suitable foraging habitat.
White-tailed kite (*Elanus leucurus*)	-	-	CFP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats.	March-August	Potential to occur. There is suitable nesting habitat onsite.
Bald eagle (*Haliaeetus leucocephalus*)	Delisted	CE	CFP	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands	February – September (nesting); October-March (wintering)	Low potential to occur. There is not suitable nesting habitat onsite but the Sacramento River represents potential foraging habitat.
Swainson's hawk (*Buteo swainsoni*)	-	CT	-	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures	March-August	Potential to occur. There is suitable nesting habitat onsite.
Burrowing owl *(Athene cunicularia)*	-	-	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural	February-August	Potential to occur. There is potentially suitable burrow habitat onsite.

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
				fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds.		
Nuttall's woodpecker (*Dryobates nuttallii*)	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands.	April-July	Potential to occur. There is suitable nesting habitat onsite.
Yellow-billed magpie (*Pica nuttallii*)	-	-	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings.	April-June	Potential to occur. There is suitable nesting habitat onsite.
Oak titmouse (*Baeolophus inornatus*)			BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree).	March-July	Potential to occur. There is suitable nesting habitat onsite.
Bullock's oriole (*Icterus bullockii*)			BCC	Breeding habitat includes riparian and oak woodlands.	March-July	Potential to occur. There is suitable nesting habitat onsite.
Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)	-	-	BCC, SSC	Breeds in salt marshes of San Francisco Bay; winters San Francisco south along coast to San Diego County.	March-July	Potential to occur. There is suitable nesting habitat onsite.
Mammals						
Western red bat (*Lasiurus blossevillii*)	-	-	SSC	Roosts in foliage of trees or shrubs; Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and	April-September	Potential to occur. Mature trees and anthropogenic structures onsite

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			
				sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores).		provide roosting habitat.
Pallid Bat (*Antrozous pallidus*)	-	-	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings.	April-September	Potential to occur. Mature trees and anthropogenic structures onsite represent suitable roosting habitat onsite.
Townsend's big-eared bat (*Corynorhinus townsendii*)	-	-	SSC	Caves, mines, buildings, rock crevices, trees.	April-September	Potential to occur. Mature trees and anthropogenic structures onsite represent suitable roosting habitat onsite.

Status Codes

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FT	FESA listed, Threatened.
BCC	USFWS Bird of Conservation Concern).
CT	CESA- or NPPA-listed, Threatened.
CE	CESA or NPPA listed, Endangered.
CR	CESA- or NPPA-listed, Rare
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians).
SSC	CDFW Species of Special Concern (CDFW).
CNDDB	Species that is tracked by CDFW's CNDDB but does not have any of the above special-status designations otherwise
1B	CRPR/Rare or Endangered in California and elsewhere.

Table 4.4-1. Special-Status Species With Potential to Occur in the Study Area

Common Name (*Scientific Name*)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA	Other			

2B	Plants rare, threatened, or endangered in California but more common elsewhere.
0.1	Threat Rank/Seriously threatened in California (more than 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
Delisted	Formally Delisted (delisted species are monitored for 5 years).

Notes: The table only shows those species that have a potential to be affected by the Project. For a complete list of surveyed species see Appendix B.
Source: ECORP 2022b

4.4.5.1 Plants

A total of 23 special-status plant species were identified as having the potential to occur within Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, five species were determined to not have potential to occur within the Study Area due to the absence of suitable habitat or the Study Area was outside the elevational range for the species. No further discussion of these species is provided in this analysis. Brief descriptions of the remaining 18 species that have the potential to occur within the Study Area are presented below.

Mexican Mosquito Fern

Mexican mosquito fern (*Azolla microphylla*) is not listed pursuant to either the federal or California Endangered Species Acts (ESA), but is designated as a California Rare Plant Rank (CRPR) 4.2 species. This species is an herbaceous annual/perennial that occurs in marshes and swamps (e.g., ponds and slow-moving water). Mexican mosquito fern blooms in August and is known to occur at elevations ranging from 100 to 330 AMSL. The current range for Mexican mosquito fern in California includes Butte, Colusa, Glenn, Inyo, Kern, Lake, Modoc, Monterey, Nevada, Plumas, San Bernardino, Santa Cruz, and Tulare counties (ECORP 2022b).

While there are no CNDDB-documented occurrences of Mexican mosquito fern within 5 miles of the Study Area, the wastewater treatment ponds within the Study Area may provide suitable habitat for this species. Mexican mosquito fern has potential to occur onsite (ECORP 2022b).

Watershield

Watershield (*Brasenia schreberi)* is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.3 species. This species is an herbaceous rhizomatous perennial that occurs usually in freshwater marshes and swamps. Watershield blooms from June through September and is known to occur from sea level to 7,220 feet AMSL. The current range for Watershield in California includes Butte, Calaveras, El Dorado, Fresno, Glenn, Lake, Lassen, Mendocino, Merced, Nevada, Plumas,

Sacramento, San Joaquin, Shasta, Sierra, Siskiyou, Sonoma, Sutter, Tehama, Trinity, Tulare, and Tuolumne counties (ECORP 2022b).

There is one documented CNDDB occurrences of watershield located within 5 miles of the Study Area and the wastewater treatment ponds may provide marginally suitable habitat. Watershield has low potential to occur onsite (ECORP 2022b).

Bristly sedge

Bristly sedge (*Carex comosa*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.1 plant. This species is a perennial rhizomatous herb that occurs in coastal prairies, marshes and swamps including lake margins, and in valley and foothill grassland. Bristly sedge blooms from May through September and is known to occur at elevations ranging from sea level to 2,050 feet AMSL. The current range of this species in California includes Contra Costa, Fresno, Lake, Mendocino, Sacramento, San Bernardino, Santa Cruz, San Francisco, Shasta, San Joaquin, San Mateo, and Sonoma counties; it is considered extirpated from San Bernardino and San Francisco counties (ECORP 2022b).

There is one documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of wastewater treatment ponds may provide marginally suitable habitat. Bristly sedge has low potential to occur onsite (ECORP 2022b).

Parry's Rough Tarplant

Parry's rough tarplant (*Centromadia parryi* ssp. *rudis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in vernal pools and valley and foothill grassland with alkaline and vernally mesic soils, seeps, and sometimes roadsides. Parry's rough tarplant blooms from May through October and is known to occur at elevations ranging from sea level to 330 feet AMSL. Parry's rough tarplant is endemic to California; its current range includes Butte, Colusa, Glenn, Lake, Merced, Modoc, Sacramento, San Joaquin, Solano, Stanislaus, and Yolo counties (ECORP 2022b).

While there are no CNDDB-documented occurrences of Parry's rough tarplant within 5 miles of the Study Area, the roadsides and other vegetation-supporting disturbed areas may provide marginally suitable habitat. Parry's rough tarplant has low potential to occur onsite (ECORP 2022b).

Bolander's Water-Hemlock

Bolander's water-hemlock (*Cicuta maculata* var. *bolanderi*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.1 species. This species is an herbaceous perennial that occurs in coastal, fresh, or brackish marshes and swamps. Bolander's water-hemlock blooms from July through September and is known to occur at elevations ranging from sea level to 655 feet AMSL. The current range for Bolander's water-hemlock in California includes Contra Costa, Marin, Sacramento, Santa Barbara, and Solano counties; however, it is presumed extirpated in Santa Barbara County (ECORP 2022b).

While there are no CNDDB-documented occurrences of Bolander's water-hemlock within 5 miles of the Study Area, the edges of wastewater treatment ponds may provide marginally suitable habitat. Bolander's water-hemlock has low potential to occur onsite (ECORP 2022b).

San Joaquin Spearscale

San Joaquin spearscale (*Atriplex joaquiniana*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in alkaline areas within chenopod scrub, meadows and seeps, playas, and valley and foothill grassland. San Joaquin spearscale blooms from April through October and is known to occur from 5 to 2,740 feet AMSL. San Joaquin spearscale is endemic to California; the current range of this species includes Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Napa, Sacramento, San Benito, San Joaquin, San Luis Obispo, Solano, and Yolo counties. It is likely extirpated from San Joaquin County, and uncertain in San Luis Obispo County (ECORP 2022b).

There is one documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of wastewater treatment ponds may provide marginally suitable habitat. San Joaquin spearscale has low potential to occur onsite (ECORP 2022b).

Woolly Rose-Mallow

Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a rhizomatous, herbaceous perennial that occurs in marshes and freshwater swamps, and often in riprap on sides of levees. Woolly rose-mallow blooms from June through September and is known to occur at elevations ranging from sea level to 395 feet AMSL. Woolly rose-mallow is endemic to California; the current range of this species in California includes Butte, Contra Costa, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties (ECORP 2022b).

There are six documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of wastewater ponds may provide marginally suitable habitat. Woolly rose-mallow has low potential to occur onsite (ECORP 2022b).

Delta Tule Pea

Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in freshwater and brackish marshes and swamps. Delta tule pea blooms from May through September and is known to occur at elevations ranging from sea level to 15 feet AMSL. Delta tule pea is endemic to California; its current range includes Contra Costa, Napa, Sacramento, San Joaquin, Solano, Sonoma, and Yolo counties (ECORP 2022b).

There are nine documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of wastewater treatment ponds may provide marginally suitable habitat. Delta tule pea has low potential to occur onsite (ECORP 2022b).

Legenere

Legenere (*Legenere limosa*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in a variety of seasonally inundated environments including wetlands, wetland swales, marshes, vernal pools, artificial ponds, and floodplains of intermittent drainages. Legenere blooms from April through June and is known to occur at elevations ranging from 5 feet to 2,885 feet AMSL. Legenere is endemic to California; the current range of this species includes Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, San Joaquin, Shasta, San Mateo, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties. It is believed to be extirpated from Stanislaus County (ECORP 2022b).

While there are no CNDDB-documented occurrences of Legenere within 5 miles of the Study Area, the edges of wastewater treatment ponds may provide marginally suitable habitat. Legenere has low potential to occur onsite (ECORP 2022b).

Heckard's Pepper-Grass

Heckard's pepper-grass (*Lepidium latipes* var. *heckardii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs on alkaline flats within valley and foothill grasslands. Heckard's pepper-grass blooms from March through May and is known to occur at elevations ranging from 5 to 655 feet AMSL. Heckard's pepper-grass is endemic to California; the current range of this species includes Glenn, Merced, Sacramento, Solano, and Yolo counties (ECORP 2022b).

While there are no CNDDB-documented occurrences of Heckard's pepper-grass within 5 miles of the Study Area, the ruderal grassland may provide marginally suitable habitat. Heckard's pepper-grass has low potential to occur onsite (ECORP 2022b).

Mason's Lilaeopsis

Mason's lilaeopsis (*Lilaeopsis masonii*) is not listed pursuant to the federal ESA, is listed as rare pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous perennial rhizome that occurs in brackish or freshwater marshes and swamps as well as in riparian scrub. Mason's lilaeopsis blooms from April through November and is known to occur at elevations ranging from sea level to 35 feet AMSL. Mason's lilaeopsis is endemic to California; its current range includes Alameda, Contra Costa, Marin, Napa, Sacramento, San Joaquin, Solano, and Yolo counties (ECORP 2022b).

There are 15 documented CNDDB occurrences of this species located within 5 miles of the Study Area (ECORP 2022b) and the edges of wastewater treatment ponds may provide marginally suitable habitat. Mason's lilaeopsis has low potential to occur onsite (ECORP 2022b).

Delta Mudwort

Delta mudwort (*Limosella australis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.1 species. This species is an herbaceous stoloniferous perennial that occurs in mud banks near freshwater or brackish marshes and swamps, and riparian scrub. Delta mudwort blooms

from May through August and is known to occur at elevations ranging from sea level to 10 feet AMSL. The current range for Delta mudwort in California includes Contra Costa, Sacramento, San Joaquin, and Solano counties (ECORP 2022b).

There are seven documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of wastewater treatment ponds may provide marginally suitable habitat. Delta mudwort has low potential to occur onsite (ECORP 2022b).

Eel-Grass Pondweed

Eel-grass pondweed (*Potamogeton zosteriformis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.2 species. This species is an aquatic herbaceous annual that occurs in assorted freshwater marshes and swamps. Eel-grass pondweed blooms from June through July and is known to occur at elevations ranging from sea level to 6,105 feet AMSL. The current range for eel-grass pondweed in California includes Contra Costa, Lake, Lassen, Mariposa, Merced, Mono, Modoc, and Shasta counties (ECORP 2022b).

There is one documented CNDDB occurrences of this species located within 5 miles of the Study Area and the wastewater treatment ponds may provide marginally suitable habitat. Eel-grass pondweed has low potential to occur onsite (ECORP 2022b).

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial rhizomatous herb that occurs in shallow, freshwater marshes and swamps. Sanford's arrowhead blooms from May through October, and is known to occur at elevations ranging from sea level to 2,135 feet AMSL. Sanford's arrowhead is endemic to California; the current range of this species includes Butte, Del Norte, El Dorado, Fresno, Madera, Marin, Mariposa, Merced, Napa, Sacramento, San Bernardino, San Joaquin, Shasta, Solano, Sutter, Tehama, Tulare, Ventura, and Yuba counties; it is presumed extirpated in Ventura County (ECORP 2022b).

There are two documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of the wastewater treatment ponds may provide marginally suitable habitat. Sanford's arrowhead has low potential to occur onsite (ECORP 2022b).

Marsh Skullcap

Marsh skullcap (*Scutellaria galericulata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.2 species. This species is an herbaceous rhizomatous perennial that occurs in mesic areas in lower montane coniferous forest, meadows and seeps, and marshes and swamps. Marsh skullcap blooms from June through September and is known to occur at elevations ranging from sea level to 6,890 feet AMSL. The current range of this species in California includes Contra Costa, El Dorado, Lassen, Modoc, Nevada, Plumas, Sacramento, Shasta, Siskiyou, and San Joaquin counties; its distribution in Siskiyou County is uncertain (ECORP 2022b).

There is one CNDDB-documented occurrences of marsh skullcap within 5 miles of the Study Area and the edges of the wastewater treatment ponds may provide marginally suitable habitat. Marsh skullcap has low potential to occur onsite (ECORP 2022b).

Side-Flowering Skullcap

Side-flowering skullcap (*Scutellaria lateriflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.2 species. This species is an herbaceous rhizomatous perennial that occurs in mesic meadows and seeps and marshes and swamps. Side-flowering skullcap blooms from July through September and is known to occur at elevations ranging from sea level to 1,640 feet AMSL. The current range of this species in California includes Sacramento and San Joaquin counties (ECORP 2022b).

There is one documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of the wastewater treatment ponds may provide marginally suitable habitat. Side-flowering skullcap has low potential to occur onsite (ECORP 2022b).

Suisun Marsh Aster

Suisun Marsh aster (*Symphyotrichum lentum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous rhizomatous perennial that occurs in marshes and swamps in brackish and freshwater. Suisun Marsh aster blooms from May through November and is known to occur at elevations ranging from sea level to 10 feet AMSL. Suisun marsh aster is endemic to California; its current range includes Contra Costa, Napa, Sacramento, San Joaquin, Solano, and Yolo counties (ECORP 2022b).

There are 22 documented CNDDB occurrences of this species located within 5 miles of the Study Area and the edges of the wastewater treatment ponds may provide marginally suitable habitat. Suisun Marsh aster has low potential to occur onsite (ECORP 2022b).

Saline Clover

Saline clover (*Trifolium hydrophilum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in marshes and swamps, mesic and alkaline valley and foothill grassland, and vernal pools. Saline clover blooms from April through June and is known to occur at elevations ranging from sea level to 985 feet AMSL. Saline clover is endemic to California; its current range includes Alameda, Contra Costa, Lake, Mendocino, Monterey, Napa, Sacramento, San Benito, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, and Yolo counties (ECORP 2022b).

While there are no CNDDB-documented occurrences of saline clover within 5 miles of the Study Area, the edges of the wastewater treatment ponds may provide marginally suitable habitat. Saline clover has low potential to occur onsite (ECORP 2022b).

4.4.5.2 Invertebrates

A total of nine special-status invertebrate species were identified as having the potential to occur within the Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, all nine were determined to be absent based on lack of suitable habitat within the Study Area or the Study Area was outside the known range for the species. No further discussion of the species is provided in this analysis.

4.4.5.3 Fish

A total of seven special-status fish species were identified as having the potential to occur within the Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, all seven were determined to be absent based on lack of suitable habitat within the Study Area or the Study Area was outside the known range for the species. No further discussion of the species is provided in this analysis.

4.4.5.4 Amphibians

A total of three special-status amphibian species were identified as having the potential to occur within the Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, all three were determined to be absent based on lack of suitable habitat within the Study Area or the Study Area was outside the known range for the species. No further discussion of the species is provided in this analysis.

4.4.5.5 Reptiles

A total of three special-status reptile species were identified as having the potential to occur within the Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, one species was determined to be absent due to lack of suitable habitat and because the Study Area is outside the range for the species. No further discussion of this species is provided in this analysis. Brief descriptions of the remaining two species that have the potential to occur within the Study Areas are presented below.

Northwestern Pond Turtle

The northwestern pond turtle (*Actinemys marmorata*) is not listed pursuant to either the federal or California ESAs; however, it is designated as a CDFW Species of Special Concern (SSC). Northwestern pond turtles occur in a variety of fresh and brackish water habitats including marshes, lakes, ponds, and slow-moving streams. This species is primarily aquatic; however, they typically leave aquatic habitats in the fall to reproduce and to overwinter. Deep, still water with abundant emergent woody debris, overhanging vegetation, and rock outcrops is optimal for basking and thermoregulation. Although adults are habitat generalists, hatchlings and juveniles and hatchlings require shallow edgewater with relatively dense submergent or short emergent vegetation in which to forage. Northwestern pond turtles are typically active between March and November. Mating generally occurs during late April and early May and eggs

are deposited between late April and early August. Eggs are deposited within excavated nests in upland areas, with substrates that typically have high clay or silt fractions. The majority of nesting sites are located within 650 feet (200 meters) of aquatic sites; however, nests have been documented as far as 1,310 feet (400 meters) from aquatic habitat (ECORP 2022b).

There are 11 CNDDB occurrences of this species located within 5 miles of the Study Area. The wastewater treatment ponds within the Study Area serve as suitable habitat. Northwestern pond turtle has potential to occur onsite (ECORP 2022b).

Giant Garter Snake

The giant garter snake (*Thamnophis gigas*) is listed as a threatened species pursuant to both the California and federal ESAs. Giant garter snakes typically inhabit perennial ponds, marshes, slow-moving streams, and agricultural ditches containing adequate water during the spring and summer months. Giant garter snakes are most active from early spring through mid-fall. The giant garter snake is endemic to the floors of the Sacramento and San Joaquin valleys of California and probably occurred historically from Butte County south to Buena Vista Lake in Kern County. Seasonally, the giant garter snake becomes active in early spring, emerging from overwintering sites to bask on emergent willows, tules, saltbush, and riprap. Generally by May, all giant garter snakes have emerged from hibernacula and are actively foraging for food. Males immediately start searching for mates. Live young are born in late July through early September and by October, most snakes begin searching for overwintering sites. Most are in hibernacula by November. As with most ectothermic vertebrates, the exact timing of activities is dependent on current climatic conditions. Males are sexually mature in approximately 3 years. Females, which achieve sexual maturity at larger size, mature in 5 years. The giant garter snake is one of the most aquatic garter snakes. It is rarely found far from water and occupies habitats such as marshes and sloughs, irrigation and drainage canals, small lakes and ponds, rice agricultural fields, and low gradient streams. Waters inhabited by this species typically feature substrates of soil, mud, or other fines. Giant garter snakes tend to be absent from larger rivers and wetlands with sand, gravel, cobble, or rock substrates, as well as from areas with extensive shading (ECORP 2022b).

There is one giant garter snake occurrence within 5 miles of the Study Area. The wastewater treatment ponds within the Study Area serve as marginally suitable habitat. There is low potential for this species to occur within upland portions onsite (ECORP 2022b).

4.4.5.6 Birds

A total of 19 special-status bird species were identified as having the potential to occur within the Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, eight species were determined to be absent due to lack of suitable habitat or because the Study Area is outside the range for the species. No further discussion of these species is provided in this analysis. Brief descriptions of the remaining 11 species that have the potential to occur within the Study Areas are presented below.

Clark's Grebe

The Clark's grebe (*Aechmophorus clarkii*) is a U.S. Fish and Wildlife Service (USFWS) BCC, but not listed pursuant to the California or federal ESA's. Clark's grebes breed on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation. In California, major breeding areas include Eagle Lake (Lassen County), Tule Lake National Wildlife Refuge (Siskiyou County, Clear Lake (Lake County), Lake Almanor (Plumas County), Thermalito Afterbay (Butte County), Bridgeport Reservoir (Mono County), and Goose Lake (Modoc County). Nesting occurs during June through August (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, the wastewater treatment ponds onsite support marginal wintering habitat. There is low potential for Clark's grebes to occur onsite (ECORP 2022b).

Great Blue Heron

Great blue herons (*Ardea herodias*) and great egrets (*Ardea alba*) are not listed pursuant to either the federal or California ESAs, but are tracked by CDFW in the CNDDB, as are other colonial nesting water birds (e.g., snowy egret (*Egretta thula]*). Great blue herons and great egrets nest colonially in trees, bushes, on the ground, and artificial structure, generally near water and in places protected from predators and disturbance, such as islands. The nesting colonies may be located within a variety of vegetation communities near water (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, the wastewater treatment ponds onsite represent suitable foraging habitat. There is potential for great blue heron to occur onsite (ECORP 2022b).

White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either the California or federal ESAs; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. This species is a common resident in the Central Valley and the entire length of the California coast, and all areas up to the Sierra Nevada foothills and southeastern deserts. In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, the trees onsite represent suitable nesting habitat. There is potential for white-tailed kites to occur within the Study Area (ECORP 2022b).

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) has been delisted under the federal ESA, but remains listed as Endangered under the California ESA. It is fully protected pursuant to the California Fish and Game Code

Section 3511 and the federal Bald and Golden Eagle Protection Act. It is a Bureau of Land Management-sensitive species, and a U.S. Forest Service sensitive species. Bald eagles breed at lower elevations in the northern Sierra Nevada and North Coast ranges. Bald eagles breed in forested areas adjacent to large waterbodies. Tree species used for nesting is quite variable and includes conifers (dominant where available), oaks, hickories, cottonwoods and aspens. Nest trees are generally the largest tree available in a suitable area. Breeding activity occurs during late-February through September, with peaks in activity from March to June (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, the Sacramento River represents potential foraging habitat. There is a low potential for bald eagle to occur onsite (ECORP 2022b).

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species and is protected pursuant to the California ESA. This species nests in North America (Canada, western U.S., and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (ECORP 2022b). In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest within tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel (*Spermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanopulus* sp.). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, discing, and irrigating. The removal of vegetative cover by such farming activities results in more readily available prey items for this species (ECORP 2022b).

There are 12 CNDDB occurrences and nest locations of this species within 5 miles of the Study Area, with the closest nest site approximately 0.10 mile away. The large trees within the Study Area provide suitable nesting habitat for this species. There is potential for Swainson's hawks to nest onsite (ECORP 2022b).

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal ESAs; however, it is designated as a BCC by the USFWS and an SSC by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds. This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel but may also use manufactured structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement. The breeding season typically occurs between February 1 and August 31 (ECORP 2022b).

There is one CNDDB occurrences of this species within 5 miles of the Study Area and burrows that may provide suitable nesting habitat were observed within the ruderal grassland. There is potential for burrowing owl to occur and nest in the Study Area (ECORP 2022b).

Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal ESAs but is considered a USFWS BCC. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (ECORP 2022b). Breeding occurs during April through July.

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, suitable nesting habitat is present within the Study Area. There is potential for Nuttall's woodpeckers to nest onsite (ECORP 2022b).

Yellow-Billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal ESAs but is considered a USFWS BCC. This endemic species is a year round resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late-January to mid-February, which may take up to 6 to 8 weeks to complete, with eggs laid during April through May, and fledging during May through June. The young leave the nest about 30 days after hatching. Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004 2006 (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, suitable nesting habitat is present within the Study Area. There is potential for yellow-billed magpie to nest onsite (ECORP 2022b).

Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either California or federal ESAs, but are considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse, and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley. They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands. Nesting occurs during March through July (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, suitable nesting habitat is present within the Study Area. There is potential for oak titmouse to nest onsite (ECORP 2022b).

Bullock's Oriole

The Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal ESAs, but is currently a BCC according to the USFWS. In California, Bullock's orioles are found throughout the state

except the higher elevations of mountain ranges and the eastern deserts. They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees. Nesting occurs from March through July (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, suitable nesting habitat is present within the Study Area. There is potential for Bullock's oriole to nest onsite (ECORP 2022b).

Saltmarsh Common Yellowthroat

The saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) considered a CDFW SSC, but has no federal special status. This is a subspecies of the widely distributed common yellowthroat found throughout North America from southeastern Alaska to southern United States and into Central American and the Caribbean. There are currently four main areas where saltmarsh common yellowthroat are found, coastal riparian and wetland areas of western Marin County and San Mateo County and the tidal marshes of San Pablo Bay and San Francisco Bay. Breeding habitat include woody swamps, brackish marsh, and freshwater marsh. The saltmarsh common yellowthroat is largely resident within its breeding range but may migrate short distances north or south, and nesting occurs from March through July (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area. suitable nesting habitat is present within the Study Area. There is a potential for saltmarsh common yellowthroats to nest onsite (ECORP 2022b).

4.4.5.7 Mammals

A total of five special-status mammal species were identified as having the potential to occur within the Study Area based on the literature review. Upon further analysis and after the reconnaissance site visit, three species were determined to be absent due to lack of suitable habitat or because the Study Area is outside the range for the species. No further discussion of these species is provided in this analysis. Brief descriptions of the remaining two species that have the potential to occur within the Study Areas are presented below (ECORP 2022b).

Western Red Bat

The western red bat (*Lasiurus blossevillii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending from southern British Columbia in Canada through Argentina and Chile in South America, and including much of the western United States. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage one to two hours after sunset. This species is considered highly migratory; however the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood (ECORP 2022b).

There is one CNDDB occurrence of this species within 5 miles of the Study Area and mature trees and anthropogenic structures onsite provide suitable roosting habitat. Western red bat has potential to roost onsite (ECORP 2022b).

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 feet). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. This species is not thought to migrate long distances between summer and winter sites (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, mature trees and anthropogenic structures onsite provide suitable roosting habitat. Pallid bat has potential to roost onsite (ECORP 2022b).

Townsend's Big-Eared Bat

The Townsend's big-eared bat is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral nose lumps and large *rabbit-like* ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet AMSL. Habitats include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. Townsend's big-eared bat primarily forages on moths. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (ECORP 2022b).

While there are no CNDDB occurrences of this species within 5 miles of the Study Area, mature trees and anthropogenic structures onsite provide suitable roosting habitat. Townsend's big-eared bat has potential to roost onsite (ECORP 2022b).

4.4.6 Critical Habitat and Essential Fish Habitat

The Study Area is designated Critical Habitat for the following federally listed species.

Steelhead (Central Valley Distinct Population Segment [DPS])

Chinook salmon (Central Valley spring-run Evolutionarily Significant Unit [ESU])

Chinook salmon (Sacramento River winter-run ESU)

Green sturgeon (Southern DPS)

While the nearby Sacramento River and Georgiana Slough could serve as potential habitat for the species listed above, these features occur outside the Study Area. There are no other aquatic resources within the Study Area that could serve has habitat.

4.4.7 Sensitive Natural Communities

Five sensitive natural communities were identified as having the potential to occur within the Study Area based on the literature review: Coastal and Valley Freshwater Marsh, Great Valley Mixed Riparian Forest, Great Valley Valley Oak Riparian Forest, Northern Hardpan Vernal Pool, and Valley Oak Woodland. None of these communities were found to occur onsite during the site assessment (ECORP 2022b).

4.4.8 Wildlife Movement/Corridors and Nursery Sites

The Study Area is located among developed residential and commercial landscapes. The majority of the Study Area is within existing roads that are heavily trafficked on a daily basis. The WWTF is fenced and regularly maintained by the City Department of Public Works. These areas are not expected to support significant wildlife movement corridors.

For the purpose of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. This data is available through CDFW's Biogeographic Information and Observation System database or as occurrence records in the CNDDB and is supplemented with the results of the field reconnaissance. No nursery sites have been documented onsite and none were observed during the site reconnaissance (ECORP 2022b).

4.4.9 Biological Resources (IV) Environmental Checklist and Discussion

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?	☐	☒	☐	☐

Less Than Significant Impact With Mitigation Incorporated.

The Project would result in temporary construction-related impacts to the upland that provides habitat for special-status species within the Study Area. Potential impacts to upland habitats include temporary

disturbance associated with staging, trenching and grading activities. Impacts by species or habitat group are summarized below.

4.4.9.1 Impacts to Special-Status Plants

There is no habitat for federally-listed plants species in the Study Area. There is low potential for one state-listed rare species (Mason's lilaeopsis), two CRPR 4.2 species (Parry's rough tarplant and Mexican mosquito fern), one CRPR 1B.1 species (Legenere), six 1B.2 species (San Joaquin spearscale, Delta tule pea, Heckard's pepper-grass, Sanford's arrowhead, Suisun Marsh aster, and saline clover), two 2B.1 species (bristly sedge, Bolander's water-hemlock, and Delta mudwort), three 2B.2 species (eel-grass pondweed, marsh skullcap, and side-flowering skullcap), and one 2B.3 species (watershield).

Overall, 17 species have low potential to occur within and along the edges of the ponds and the annual grassland. Work within the ponds is limited to installation of a new backup generator, new aerators, blowers and other required electrical equipment. Equipment installation could permanently remove or alter a minimal amount of potential habitat for these species. Similarly, disturbance of ruderal grassland would be limited to construction access and staging. The majority of ground disturbance associated with trenching would occur within existing roadways, where vegetation is not present. Overall, the effects are expected to be less than significant and minimized by the implementation of Mitigation Measure BIO-1.

4.4.9.2 Impacts to Northwestern Pond Turtles

Northwestern pond turtles may occur in and adjacent to the wastewater treatment ponds within the Study Area. Construction activities within the wastewater treatment ponds have potential to impact northwestern pond turtles if present. Overall, the effects are expected to be temporary and minimized by the implementation of Mitigation Measures BIO-1 and BIO-2.

4.4.9.3 Impacts to Giant Garter Snake

The wastewater treatment ponds provide marginal habitat for giant garter snake, and giant garter snakes have low potential to occur. Construction activities within the wastewater treatment ponds have potential to impact giant garter snakes if present. However, potential effects are expected to be temporary and minimized by the implementation of Mitigation Measure BIO-1 and BIO-3.

4.4.9.4 Impacts to Special-Status Birds

There is potential for 11 special status bird species to occur within or adjacent to the Study Area. Additionally, all birds and their nests are protected by the federal Migratory Bird Treat Act (MBTA) and California Fish and Game Code. Construction activities have potential to impact nesting birds if present within or adjacent to the construction activities. Implementation of Mitigation Measure BIO-4 would minimize potential effects to special-status birds.

4.4.9.5 Impacts to Special-Status Bats

There are three special-status bats with potential to occur in the Study Area. The Project is not anticipated to require removal of trees and/or structures that may provide suitable roosting habitat is not anticipated. However, implementation of mitigation measure BIO-5 would further reduce the potential for effects to special status bats if removal trees and/or structures is required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒

No impact.

The Study Area does not support any riparian habitat or sensitive natural communities; therefore, the Project would not have an adverse effect on riparian habitat or sensitive natural communities. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA, are typically not Waters of the U.S. or Waters of the State. Therefore, it is unlikely that Project work within the wastewater treatment ponds would be subject to regulation under Sections 401/404 of the CWA and the California Porter-Cologne Water Quality Act. The USACE and RWQCB will make the final determination on the jurisdictional status of the wastewater treatment ponds.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒

No Impact.

The Study Area is located among developed residential and commercial landscapes and existing roads. These areas are not expected to support significant wildlife movement corridors therefore the Project would not interfere with wildlife movement.

No nursery sites, as described above, have been documented within the Study Area and none were observed during the site reconnaissance. Therefore, the Project site would not be considered a linkage or corridor between conserved natural habitat areas and have no impact in this area (ECORP 2022b).

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

No Impact.

The 2000 General Plan does not include any policies designed to protect biological resources. Isleton Municipal Code Chapter 8.16 Planting, Preservation and Protection of Trees includes requirements for the protection of trees in the City. However, the Project does not involve the removal of any trees. Therefore, the Project does not conflict with a local policy or ordinance protecting biological resources, including tree ordinances.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

No Impact.

The Study Area is not currently covered by any local, regional, or state conservation plan. While the Study Area is within the vicinity of the South Sacramento County Conservation Program (SSHCP), the City of Isleton is not a participating entity in the SSHCP and the Study Area is excluded from the SSHCP development area (ECORP 2022b). Therefore, the Project would not conflict with a local, regional, or state conservation plan.

4.4.10 Mitigation Measures

BIO-1: **General.** The Project will implement erosion control measures and BMPs to reduce the potential for sediment or pollutants at the Project site. Measures may include the following:

- Fiber rolls used for erosion control will be certified by the California Department of Food and Agriculture as weed-free.
- Seed mixtures applied for erosion control will not contain California Invasive Plant Council-designated invasive species (http://cal-ipc.org/) and will be composed of native species appropriate for the site.
- Trash generated onsite will be promptly and properly removed from the site.
- Any fueling in the upland portion of the Study Area will use appropriate secondary containment techniques to prevent spills.
- A qualified biologist will conduct a mandatory Worker Environmental Awareness Program for all contractors, work crews, and any onsite personnel on the potential for special status species to occur on the Project site. The training will provide an overview of habitat and characteristics of the species, the need to avoid certain areas, and the possible penalties for non-compliance.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-2: **Northwestern Pond Turtle.** Conduct a preconstruction northwestern pond turtle survey in the Project Area within 48 hours prior to construction activities. Any northwestern pond turtle individuals discovered in the Project work area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-3: **Giant Garter Snake.** To the extent feasible, work within suitable habitat for giant garter snake should be limited to the active season, approximately May 1 to October 1.

Conduct a preconstruction giant garter snake survey in the Project area within 24 hours prior to construction activities. Any giant garter snake individuals discovered in the Project work

area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 200 feet from the Project work area where they were found.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-4: **Nesting Birds.** To protect nesting birds, no Project activity shall begin from February 1 through August 31 unless the following surveys are completed by a qualified wildlife biologist. Separate surveys and avoidance requirements are listed below for all nesting birds and raptors, including, burrowing owl and Swainson's hawk.

- All Nesting Birds - Within 14 days prior to construction (or less if recommended by CDFW), a qualified biologist shall survey for nesting activity of birds within each Project work area and a 100-foot radius. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
- Raptors– Within 14 days prior to construction, a qualified biologist survey for nesting activity of birds of prey within each Project work area and a 500-foot radius. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
- Burrowing owl – Within 14 days prior to construction, a qualified wildlife biologist shall survey for burrowing owl within the Project work area and a 250-foot radius of the Project work area. Surveys shall be conducted at appropriate times (dawn or dusk) to maximize detection. Any active nests observed shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.
- Swainson’s hawk – Within 14 days prior to construction, a qualified biologist shall survey for nesting activity of Swainson’s hawk within each Project work area and a 0.25-mile radius. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

BIO-5: **Bats.** Within 6 months of proposed removal of potential roosting habitat, a qualified biologist will survey for all suitable roosting habitat (e.g., manufactured structures, trees) proposed for removal. If suitable roosting habitat is identified and proposed for removal, a qualified biologist will conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If roosting bats are found, consultation with CDFW prior to initiation of construction activities may be required. If bats are not found during the preconstruction surveys, no further measures are necessary.

Timing/Implementation: *Prior to and during construction activities*

Monitoring/Enforcement: *City of Isleton*

4.5 Cultural Resources

The Historic Properties Identification Report for the Isleton Wastewater Treatment System Improvement Project was prepared by ECORP Consulting, Inc. (2023) for the Proposed Project to identify potentially eligible cultural resources (i.e., archaeological sites and historic buildings, structures, and objects) that could be affected by the Project. The information provided below is an abridged version of this report and is provided here to afford a brief context of the potential cultural resources in the Project Area.

4.5.1 Confidentiality Restrictions

Sections 6253, 6254, and 6254.10 of the California Code authorize state agencies to exclude archaeological site information from public disclosure under the Public Records Act. In addition, the California Public Records Act (Government Code Section 6250 et seq.) and California's open meeting laws (The Brown Act, Government Code Section 54950 et seq.) protect the confidentiality of Native American cultural place information. Under Exemption 3 of the federal Freedom of Information Act (5 U.S. Code 5 [USC]), because the disclosure of cultural resources location information is prohibited by the Archaeological Resources Protection Act of 1979 (16 USC 470hh) and Section 304 of the National Historic Preservation Act (NHPA), it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the California Historical Resources Information System (CHRIS) maintained by the California Office of Historic Preservation (OHP) prohibit public dissemination of records search information. In compliance with these requirements, the results of this cultural resource investigation were prepared as a confidential document, which is not intended for public distribution in either paper or electronic format. As such, the Historic Properties Identification Report is not included as an appendix in this IS/MND. While information describing the various Cultural Resources time periods is included in the IS/MND discussion, all references to location of artifacts have been removed for confidentiality and protection of these resources.

4.5.2 Area of Potential Effects

The Area of Potential Effects (APE) consists of the horizontal and vertical limits of a project and includes the area within which significant impacts or adverse effects to Historical Resources or Historic Properties could occur as a result of the project. The APE is defined for projects subject to regulations implementing Section 106 (federal law and regulations). For projects subject to the CEQA review, the term Project Area is used rather than APE. The terms Project Area and APE are interchangeable for the purpose of this document.

The horizontal APE consists of all areas where activities associated with a project are proposed and, in the case of this Project, equals the Project Area subject to environmental review under CEQA. This includes areas proposed for sewer line and manhole installation and equipment upgrades, as well as potential equipment paths of travel and staging. The horizontal APE is illustrated on Figure 4 and represents the survey coverage area.

The vertical APE is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical APE for this Project includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the project and is dependent upon the locations where maximum depth trenching will occur, which may be up to 12 feet below the surface as described in the Project description. Therefore, a review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

The vertical APE also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. Equipment upgrades at the wastewater treatment facility will be within existing facility structures and will not exceed the height of surrounding structures. No other aboveground structures will be constructed outside of the wastewater treatment facility and Treatment Pond #1. Once completed, the Project's vertical APE will be ground surface level at the location of sewer installation.

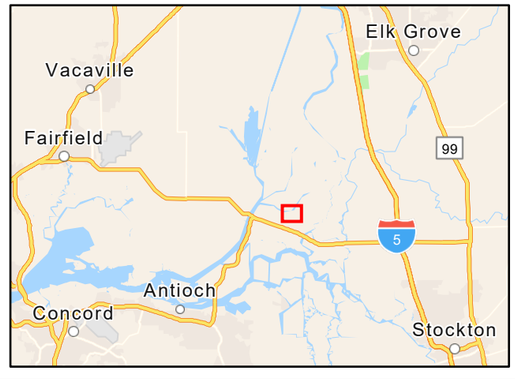
Map Contents

- Project Boundary - 34.17 ac.

Survey Coverage

- Surveyed
- Not Surveyed

Sources: Maxar (9/7/2021), Sacramento County (3/26/2018), CDFW, ESRI



Location: N:\2022\2022-178 Isleton WWTP Improvement Project\MAPS\Cultural_Resources\IsletonWWTP_Cultural_Resources.aprx - Isleton CRM Survey Coverage 20221007 (jwelsh - 10/7/2022)

Map Date: 10/7/2022

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 900

Figure 4. Study Area for Cultural Resources

2022-178 Isleton WWTP Improvement Project

4.5.3 Methodology

4.5.3.1 Records Search

A records search for the APE was completed at the North Central Information Center (NCIC) of the CHRIS at California State University, Sacramento on September 9, 2022 (NCIC search #SAC-22-178). The purpose of the records search was to determine the extent of previous surveys within a 1-mile (800-meter) radius of the Proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

Forty-nine previous cultural resource investigations have been conducted in or within 1 mile of the property, covering approximately 80 percent of the total area surrounding the property within the records search radius. Of the 49 studies, five were conducted within the Project Area and the other 44 were within the 1-mile radius. These studies revealed the presence of a pre-contact habitation site and historical sites, including a cannery, commercial structures, and historic water system. The previous studies within 1 mile of the Project Area were conducted between 1974 and 2021.

The results of the records search indicate that 80 percent of the Project Area has been previously surveyed for cultural resources; however, these studies were conducted in smaller segments, at different times, by different consultants, as many as 39 years ago under obsolete standards. Therefore, ECORP conducted a pedestrian survey of the accessible and exposed ground portions of the Project Area for the Project under current protocols. ECORP also traversed all paved roadways proposed for sewer installation.

In addition to the official records and maps for archaeological sites and surveys in Sacramento County, the following historic references were also reviewed: Built Environment Resource Directory (BERD; OHP 2020); Historic Property Data File for Sacramento County (OHP 2012); The National Register Information System (National Park Service [NPS] 2022a); OHP California Historical Landmarks (CHL; OHP 2022); CHL (OHP 1996 and updates); California Points of Historical Interest (OHP 1992 and updates); Directory of Properties in the Historical Resources Inventory (1999); Caltrans Local Bridge Survey (Caltrans 2019); Caltrans State Bridge Survey (Caltrans 2018); and *Historic Spots in California* (Kyle 2002).

Other references examined include a search of historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM] 2022), for which there were no GLO maps available for Township 4N Range 3E. Other historic maps reviewed include the following:

1910 U.S. Geological Survey (USGS) “Isleton, California” topographic quadrangle map (1:31,680 scale);

1952 USGS “Isleton, California” topographic quadrangle map (1:24,000 scale); and

1978 (minor revision 1993) USGS “Isleton, California” topographic quadrangle map (1:24,000 scale).

ECORP reviewed historic aerial photos taken in 1957, 1964, 1974, 1978, and 1987 for any indications of property usage and built environment.

ECORP reviewed the Sacramento County Register, which only lists historical resources within the Sacramento city limits.

4.5.3.2 Sacred Lands File Coordination Methods

In addition to the records search, ECORP contacted the California Native American Heritage Commission (NAHC) on August 5, 2022 to request a search of the Sacred Lands File (SLF) for the Project Area. This search determined whether or not the California Native American tribes within the Project Area have recorded Sacred Lands, because the SLF is populated by members of the Native American community with knowledge about the locations of TCRs.

The results of the SLF search were received by ECORP on October 12, 2022. Following the SWRCB-prescribed process for CEQA-Plus projects, ECORP contacted all persons or organizations on the NAHC list by letter on December 13, 2022 to request information on any unrecorded cultural resources that may exist within the current Project Area, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action.

4.5.3.3 Other Interested Party Consultation Methods

ECORP mailed letters to the Sacramento County Historical Society and Delta Education Cultural Society on August 8, 2022 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area.

4.5.3.4 Field Methods

ECORP subjected the Project Area to an intensive pedestrian survey on September 29, 2022, under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983) using 15-meter transects. ECORP expended one person-day in the field. At the time, ECORP examined the limited areas of exposed ground through easements and road shoulders for indications of surface or subsurface cultural resources. ECORP staff inspected the general morphological characteristics of the ground surface for indications of subsurface deposits that may be manifested on the surface. No subsurface investigations or artifact collections were undertaken during the pedestrian survey.

Standard professional practice requires that all cultural resources encountered during the survey be noted or recorded using Department of Parks and Recreation (DPR) 523-series forms approved by the California OHP. The resources are usually photographed, mapped using a handheld Global Positioning System receiver, and sketched as necessary to document their presence using appropriate DPR forms.

4.5.4 Environmental Setting

The Project Area is located on the southern bank of the Sacramento River on the northern edge of Andrus Island, approximately 2.93 miles upstream of the confluence of the Sacramento River, Steamboat Slough, and Cache Slough. Isleton is surrounded by agricultural fields on all sides. Jackson Slough is oriented in an east-to-west direction and enters Isleton on the western side. Georgiana Slough forms the southern boundary of Andrus Island. Jackson Slough Road, eventually Jackson Slough Boulevard, parallels the slough on the eastern side. Elevations range from 4 feet BMSL to 11 feet AMSL.

According to the NRCS soil website (2022), four soil types are located within the Project Area: Rindge mucky silt loam, partially drained, 0- to 2-percent slopes, Sailboat silt loam, partially drained, 0- to 2-percent slopes, Sailboat- Urban land complex, partially drained, 0- to 2-percent slopes, and Scribner clay loam, partially drained, 0- to 2-percent slopes.

The dominant plant community within the Project Area consists of ruderal grasslands. This grassland community is found on the landscape surrounding buildings, Wilson Park (the baseball field), and the wastewater treatment facility. Bermuda grass, filed bindweed, bristly oxtongue, medusa head grass, prickly lettuce, and Italian ryegrass are represented in this community. The remainder of the Project Area is wastewater treatment ponds and paved or developed lands (ECORP 2023).

4.5.4.1 Pre-Contact History

Regional

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found, but cannot definitely be associated with human artifacts.

Around 8,000 BP, there was a shift in focus from hunting toward a greater reliance on plant resources. Archaeological evidence of this trend consists of a much greater number of milling tools (e.g., metates and manos) for processing seeds and other vegetable matter. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon.

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material.

Local

This section provides a regional overview with contextual elements drawn from California's Central Valley Region, the Western Foothills Region, and from the transition zone itself where the Project is located. There has been more extensive research and study of Central Valley pre-contact history than that of the Sierra Nevada foothill zone, but a fair amount of cultural overlap exists within these regions. This section includes the most recent and readily available research of both regions and includes some reference to the climactic changes that swept the Sierra Nevada being a catalyst for population movement that led to cultural change in the foothills (ECORP 2023).

California's Great Central Valley has long held the attention of archaeologists and was a focus of early research in California. Archaeological work during the 1920s and 1930s led to the cultural chronology for Central California. This chronology was based on the results of excavations conducted in the lower

Sacramento River Valley. This chronology identified three archaeological cultures, named Early, Transitional, and Late (ECORP 2023).

Following years of documenting artifact similarities among sites in the San Francisco Bay region and the Delta, a cultural model known as the Central California Taxonomic System (CCTS) was. This system proposed a linear, uniform sequence of cultural succession in Central California, and explicitly defined Early, Middle, and Late horizons for cultural change. Archaeological researchers have subsequently refined and redefined aspects of the CCTS. For instance, the most recent sequence is divided into three broad periods: The Paleoindian Period (11,550 cal. BC to 8,550 cal. BC); the three-staged Archaic period, consisting of the Lower Archaic (8,550 cal. BC to 5,550 cal. BC), Middle Archaic (5,550 cal. BC to 550 cal. BC), and Upper Archaic (550 cal. BC to cal. AD 1100); and the Emergent Period (cal. AD 1100 to Historic). The three divisions of the Archaic Period correspond to climate changes. This is the most recently developed sequence and is now commonly used to interpret Central California prehistory. The aforementioned periods are described below.

Paleoindian Period. This period began when the first people began to inhabit what is now known as the California culture area. It was commonly believed these first people (i.e., hunters and gatherers) subsisted on big game and minimally processed foods, presumably with no trade networks. More recent research indicates these people may have been more sedentary, relied on some processed foods, and traded (ECORP 2023). Populations likely consisted of small groups traveling frequently to exploit plant and animal resources.

Archaic Period. This period was characterized by an increase in plant exploitation for subsistence, more elaborate burial accoutrements, and increase in trade network complexity (ECORP 2023). The three divisions that correspond to pre-contact climate change are characterized by the following aspects:

Lower Archaic Period: This period is characterized by cycles of widespread floodplain and alluvial fan deposition. Artifact assemblages from this period include chipped-stone crescents and early wide-stemmed points, marine shell beads, eastern Nevada obsidian, and obsidian from the north Coast Ranges. These types of artifacts found on the sites dating to this period indicate trade was occurring in multiple directions. A variety of plant and animal species were also utilized, including acorns, wild cucumber, and manzanita berries.

Middle Archaic Period: This period is characterized by a drier climate period. Rosenthal et al. (2007:153) identified two distinct settlement/subsistence patterns in this period: the Foothills Tradition and the Valley Tradition. Functional artifact assemblages consisting primarily of locally sourced flaked-stone and groundstone cobbles characterize the Foothills Tradition, while the Valley Tradition was generally characterized by diverse subsistence practices and extended periods of sedentism.

Upper Archaic Period: This period is characterized by abrupt change to wetter and cooler environmental climate conditions. Much greater cultural diversity is evident from this period. More specialized artifacts, such as bone tools, ceremonial blades, polished and groundstone plummets, saucer and saddle *Olivella* shell beads, *Haliotis* shell ornaments, and a variety of groundstone implements are characteristic of this period.

Emergent Period. This period is most notably marked by the introduction of the bow and arrow, the emergence of social stratification linked to wealth, and more expansive trade networks signified by the presence of clam disk beads that were used as currency. The Augustine pattern (the distinct cultural pattern of the Emergent Period) is characterized by the appearance of small projectile points (largely obsidian), rimmed display mortars, flanged steatite pipes, flanged pestles, and chevron-designed bird-bone tubes.

Large mammals and small seeded resources appear to have made up a larger part of the diet during this period (Fredrickson 1968; Meyer and Rosenthal 1997).

The following discussion summarizes the cultural patterns and the different local developments that are represented in archaeological deposits in the region surrounding the Project Area.

The Windmiller Pattern of the Early Horizon, dates to the Middle Archaic and may be the most extensively studied of all the cultural patterns defined for the Central Valley. Most notable characteristics are:

large, heavy stemmed and leaf-shaped projectile points commonly made of a variety of materials other than obsidian;

perforate charmstones;

Haliotis and *Olivella* shell beads and ornaments;

trident fish spears;

baked clay balls (presumably for cooking in baskets);

flat slab milling stones;

small numbers of mortars; and

ventrally extended burials oriented toward the west.

The subsistence pattern of Windmiller groups probably emphasized hunting and fishing, supplementing it with collection of seeds (possibly including acorns) (ECORP 2023).

Windmiller groups acquired obsidian from at least two Coast Ranges and three trans-Sierran sources, *Haliotis* and *Olivella* shells and ornaments from the coast, and quartz crystals from the Sierra Nevada foothills. It is widely hypothesized that the bulk of these materials were acquired through trade; however, some may have been acquired as part of seasonal movements between the Central Valley and the Sierra Nevada foothills (ECORP 2023).

The succeeding Middle Horizon was first recognized at site CA-SAC-66. Much less-published material discusses the patterns defined for this era than does Windmiller; nonetheless, some of the most notable characteristics are:

tightly flexed burials with variable orientation;

red ochre stains in burials;

distinctive *Olivella* and *Haliotis* beads and ornaments;

distinctive charmstones;

cobble mortars and evidence of wooden mortars;

numerous bone tools and ornaments;

large, heavy foliate and lanceolate concave base projectile points made of materials other than obsidian; and

objects of baked clay.

Further classification of the Middle Archaic into the Foothills Tradition and Valley Tradition helped to clarify the different types of cultural sequences, which occurred during these time periods.

The Sierra Nevada experienced significant climactic shifts and concomitant vegetation change throughout the Holocene, but pollen analysis and climactic records indicate that the current climate pattern and primary constituents of vegetation communities were in place by the Middle Archaic around 1,000 BC. Seasonal transhumance practiced by indigenous populations of the Sierra may have become more consistent during this period of relative environmental stasis.

Palaeobotanical analysis from sites of the Foothills Tradition confirm that acorns and pine nuts were preferred for subsistence. Sites near the Project Area associated with the Valley Tradition are rare in the early Middle Archaic (ca. 5,550 to 2,050 cal. BC). Sites associated with later portions of the Middle Archaic (post-2,050 cal. BC) near the Project Area produced elaborate material culture and diverse dietary and technological assemblages.

The next era in the region is identified as the Late Horizon, the Hotchkiss Culture, and the Augustine Pattern. The culture was formed by populations during the later Upper Archaic and Emergent periods, and ranges in age from around 550 cal. BC to contact (dates vary between the different models of prehistory developed for the region). The Upper Archaic, as discussed above, corresponds with the late Holocene change in environmental conditions to a wetter and cooler climate. The Emergent Period and Late Horizon are markedly represented by the introduction of bow-and-arrow technology, as well as more pronounced cultural diversity as reflected in diversity of burial posturing, artifact styles, and material culture. This era primarily represents both local innovation and the blending of new cultural traits introduced into the Central Valley.

Paleoenvironmental data during this period in the Sierra Nevada suggests severe droughts occurred from around AD 892 to 1112 and AD 1210 to 1350. These drier conditions surely affected the seasonal resource procurement rounds of the native populations during this time, and likely led to an influx of population movement and cultural blending into the foothills zone and Central Valley by Sierra Nevada groups.

Despite the varying designations, this emergent era is distinguished in the archaeological record by intensive fishing, extensive use of acorns, elaborate ceremonialism, social stratification, and cremation of the dead. Artifacts associated with the defined patterns include bow and arrow technology (evidenced by small projectile points), mortars and pestles, and fish harpoons with unilaterally or bilaterally placed barbs

in opposed or staggered positions. Mortuary patterns include flexed burials and cremations, with elaborate material goods found in association with prestigious individuals. A local form of pottery, Cosumnes brown ware, emerged in the lower Sacramento Valley (ECORP 2023).

4.5.4.2 Ethnography

Following is a brief description of the Ethnography of the Project Area. This discussion is further expanded in Section 4.18 of this IS. The reader is referred to this section for additional information.

Ethnographically, the Project Area is in a portion of the territory occupied by the Utian-speaking Eastern Miwok. The Eastern Miwok is comprised of three groups: the Plains Miwok, who occupied the area between Freeport and Rio Vista along the Sacramento River, and extending eastward along the Mokelumne and Cosumnes rivers; the Bay Miwok, who occupied the Sacramento-San Joaquin Delta area west to the eastern portion of Contra Costa County; and the Sierra Miwok, who occupied the foothill region south of the Cosumnes River to the upper drainages of the Chowchilla and Merced rivers (ECORP 2023).

The Project Area is located on the margin of the Plains Miwok area, which included tribelets along the Sacramento, Cosumnes, and Mokelumne rivers. Tribelets were the primary political units and had defined boundaries which excluded resource use by members of other tribelets. Tribelets often consisted of a population of 300 to 500 people. Within each tribelet were permanent settlements, as well as seasonal hunting and gathering campsites (Levy 1978). A total of 28 tribelets made up the Plains Miwok, and tribelets would sometimes group together to form larger units, such as the Mokelumne, the Cosumnes, and the North Delta groups.

4.5.4.3 Post Contact History

Regional

The first European to visit California was Spanish maritime explorer Juan Rodriguez Cabrillo in 1542. The Viceroy of New Spain (Mexico) sent Cabrillo north to look for the Northwest Passage. Cabrillo visited San Diego Bay, Catalina Island, San Pedro Bay, and the northern Channel Islands. The English adventurer Francis Drake visited the Miwok Native American group at Drake's Bay or Bodega Bay in 1579. Sebastian Vizcaíno explored the coast as far north as Monterey in 1602. He reported that Monterey was an excellent location for a port.

Colonization of California began with the Spanish Portolá land expedition. The expedition, led by Captain Gaspar de Portolá of the Spanish army and Father Junipero Serra, a Franciscan missionary, explored the California coast from San Diego to the Monterey Bay Area in 1769. As a result of this expedition, Spanish missions to convert the native population, presidios (forts), and pueblos (towns) were established. The Franciscan missionary friars established 21 missions in Alta California (the area north of Baja California) beginning with Mission San Diego in 1769 and ending with the mission in Sonoma established in 1823. The purpose of the missions and presidios was to establish Spanish economic, military, political, and religious control over the Alta California territory. No missions were established in the Central Valley. The nearest missions were in the vicinity of San Francisco Bay and included Mission San Francisco de Asis

(Dolores) established in 1776 on the San Francisco peninsula, Mission Santa Clara de Asis at the south end of San Francisco Bay in 1777, Mission San Jose in 1797, Mission San Rafael, established as an asistencia in 1817 and a full mission in 1823, and Mission San Francisco Solano in Sonoma in 1823 (California Spanish Missions 2011; Castillo 1978;). Presidios were established at San Francisco and Monterey. The Spanish took little interest in the area and did not establish any missions or settlements in the Central Valley.

After Mexico became independent from Spain in 1821, what is now California became the Mexican province of Alta California with its capital at Monterey. American trapper Jedediah Smith traveled along the Sacramento River and into the San Joaquin Valley in 1827 to meet other trappers of his company who were camped there, but no permanent settlements were established by the fur trappers.

The Mexican government closed the missions in the 1830s and former mission lands, as well as previously unoccupied areas, were granted to retired soldiers and other Mexican citizens for use as cattle ranches. Much of the land along the coast and in the interior valleys became part of Mexican land grants or ranchos. There were small towns at San Francisco (then known as Yerba Buena) and Monterey during the Mexican Period. The rancho owners lived in one of the towns or in an adobe house on the rancho. The Mexican Period includes the years 1821 to 1848.

John Sutter, a European immigrant, built a fort at the confluence of the Sacramento and American rivers in 1839 and petitioned the Mexican governor of Alta California for a land grant, which he received in 1841. Sutter built a flour mill and grew wheat near the fort. Gold was discovered in the flume of Sutter's lumber mill at Coloma on the South Fork of the American River in January 1848. The discovery of gold initiated the 1849 California Gold Rush, which brought thousands of miners and settlers to the Sierra foothills east and southeast of Sacramento.

The American Period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the U.S. in 1848. As a result of the treaty, Alta California became part of the U.S. as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office. Land outside the land grants became federal public land, which was surveyed into sections, quarter-sections, and quarter-quarter sections. The federal public land could be purchased at a low fixed price per acre or could be obtained through homesteading after 1862 (ECORP 2023).

Project Area

Josiah Poole founded the City of Isleton in 1874, located in southwestern Sacramento County, which expanded as a result of land reclamation and local agricultural development. An 1874 Sacramento County assessor map book depicts Josiah Poole as the owner of the land where Isleton is located today (Sacramento County Assessor map book 1874). Poole, also the Postmaster, constructed a wharf on the Sacramento River, and a booming town soon followed. Thousands of Chinese laborers began immigrating to the U.S. during the early 1870s to gain employment assisting in the construction of extensive levees. Construction of these levees created valuable farmland and sugar beet, pear, and asparagus industries expanded. The Chinese center of the town around 1875 had around 1,500 residents. By 1880, Isleton

thrived on the construction of beet sugar and by the turn of the 20th century, asparagus was the primary crop. U.S. Congress passed numerous laws during the late 1890s and early 1900s inhibiting the immigration of Chinese immigrants and the population of Japanese residents grew considerably. The cannery workforce eventually numbered more than 90 percent Asian.

Fires in 1915 and 1926 destroyed Isleton's Chinese and Japanese centers or districts. The structures were rebuilt, using metal siding to assist in fire prevention (NPS 2022b). These two districts housed gambling halls, schools, hotel, movie theater, and residences and were family-oriented, unlike many other Asian Delta communities. In addition to fires, Isleton flooded in 1878 and 1881, and again in 1890, 1907, and 1972.

In addition to the Sacramento River, which provided easy trading access, the Southern Pacific Railroad constructed a segment through Isleton, providing additional means to transport materials. The rail line was eventually abandoned (ECORP 2023).

4.5.4.4 Road Development

Following is a brief historical context for road development during the period when the roads throughout the City of Isleton were established and modified. The context is included to better understand factors and context associated with road development to assist with the evaluation of IW-01, the complex of roads within Isleton.

Public roads in California and other western states trace legislative origins to the enabling acts of 1802 and 1803, which set aside proceeds from western land sales for the "laying out, opening and making roads" in western territories. The acts initially funded the National Road, a wagon road that traversed the Appalachian Mountains and facilitated early western settlement.

During the first half of the 19th century, as the U.S. made western territorial gains, Congress directed Army engineers to establish a network of wagon roads linking western military installations; federal railroad surveyors carried on the work during the 1850s and 1860s. For a generation of overland emigrants and freighters, western wagon roads established by federal surveyors pointed the way to California (ECORP 2023. Many western wagon roads, particularly those who traversed mountain passes, had Native American origins. In California, nonnative incursions such as the de Anza (1774), Portola (1769), and Fremont (1844) expeditions relied on directions given by Native American guides. The roads established by Spanish and American newcomers linking missions, presidios, pueblos, ranchos, and forts in California often superseded Native American footpaths used for generations (ECORP 2023).

4.5.4.5 The Good Roads Movement

Overshadowed by railroads, pioneer wagon roads in California and other western states became neglected and degraded during the late 19th century. "By 1900," observes a planning historian, "the nation with the greatest railway system in the world had the worst roads" (Johnson 1990). Interest in road building revived after 1890 as farmers and ranchers, many disillusioned with railroads, began asking county officials for better wagon roads. They were joined by millions of bicyclists who called for smoother roads in town and in the countryside. Joining forces, farmers, ranchers, and bicyclists began organizing

local, state, and national *good roads* campaigns. In response, the federal government established the Office of Road Inquiry in the Department of Agriculture to study new road building techniques (ECORP 2023).

Dusty during summer and fall months, muddy through the winter and spring, unimproved wagon roads in California played havoc with horse-drawn vehicles and bicycles. Overcoming mud and dust became the main objective of good roads proponents. Plank roads made from lumber first appeared in California in the 1850s. Gravel roads and macadam, a form of compacted gravel coated with oil, came into use during the late 19th century. Finally, beginning in 1890, concrete roads topped by a mixture of bitumen, aggregate, and sand called *asphalt* became the standard modern road surface. Durable, smooth, and impervious to water, asphalt roads withstood winter weather, reduced vehicular wear and tear, and facilitated better drainage (ECORP 2023).

4.5.4.6 City Streets

Americans built new towns and cities along rivers, canals, wagon roads, railroads, and highways during the 19th century. Most new towns and cities began with a plat for a rectilinear street grid filed at a county recorder's office. Once filed, streets and lots became legal entities on the land, and landowners began selling lots to buyers who built residential and commercial properties on rectangular lots. By creating right-angled streets, alleys, and lots, street grids simplified the work of staking out property boundaries and describing lots in written deeds. For growing towns and cities, street grids also simplified growth, as landowners on the edge of town platted new additions simply by extending straight streets into surrounding rural areas. As they matured and grew during the 19th and 20th centuries, many American cities and towns became incorporated under state charters. Incorporation transferred responsibility for street maintenance from county boards of supervisors to city governments. Incorporation also allowed city leaders to issue bonds and take on debt, which they used to finance modern street improvements such as paving, curbs, gutters, sidewalks, streetcar rails, and sanitation features such as sewers, storm drains, and water mains, which engineers typically buried beneath city streets (ECORP 2023).

4.5.5 Cultural Resources (V) Environmental Checklist and Discussion

	Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

ECORP archeologists, as a part of the Historic Properties Identification Report, surveyed the Project Area for cultural resources on September 29, 2022. Most of the Project Area consisted of paved road surfaces. Gravel roads constructed on berms, which are covered in short grasses, surrounded the wastewater treatment plant leach fields. Portions of the Proposed Project Area expanded onto private land; these areas with restricted access were not surveyed in their entirety. Surface visibility over much of the Project

Area was poor (0 to 10 percent), due to the paved surfaces. Most of the ground surface in Wilson Park is covered in regularly maintained grass for a ball field. In addition, ECORP inspected areas with open ground visibility, especially along the edge of paved roads. Back dirt from rodent burrows was also inspected. ECORP did not identify areas of pre-contact cultural materials or evidence of habitation from the exposed soil. The previously recorded resources were revisited.

Previously Recorded Resources

As a result of previous investigations by other firms a total of three cultural resources were recorded within the Project Area: the Isleton Chinese and Japanese Commercial Districts; the Southern Pacific Railroad Grade; and a Tribal Cultural Landscape. The field survey conducted by ECORP identified a group of historic-period roads constructed in the City of Isleton and recorded them as a single-plat: IW-01. ECORP also noted the presence of Wilson Park, Isleton wastewater leach fields and corporate yard, a distribution line, as well as Isleton Mobile Home Park and Apartments. These latter resources were noted but not recorded due to no potential for the Project to impact those resources, either directly or indirectly. Site descriptions follow.

Isleton Chinese and Japanese Commercial Districts (P-34-2351)

The National Register-listed Isleton Chinese and Japanese Commercial Districts consist of brick-and-frame commercial buildings constructed after a 1926 fire destroyed the town. The district encompasses three square blocks between E and H streets and is bisected, east to west by Main Street. The Japanese district is located east of F Street and the Chinese district is located west. Both districts, though distinct in description, are recorded and listed on the National Register of Historic Places (NRHP) as one resource (NRHP# HRI-5641-006-9999). The districts are listed in the National Register and determined eligible under Criterion A for its contribution to ethnic heritage for the Asian community and C for its late 19th and early 20th century American commercial architecture that emphasizes commerce and Asian influence. Many of the buildings have had little to no alteration and continue to preserve the *original Main Street architecture*. The period of significance for the Chinese and Japanese Commercial Districts is between 1926 and 1941. The district boundaries include areas historically known as Chinatown and the Japanese Section as well those areas described by local residents who lived during the period of significance. The buildings consist of one and two stories, and most have gabled roofs with false fronts and stepped or peaked parapets. Corrugated metal or pressed tin over horizontal wood boards were used as fire prevention methods, which is unique to the City of Isleton. Architectural details include cornice moldings, diamond or geometric patterns in the brick, and raised courses. Tin was overlapped in various-sized sections haphazardly creating a mosaic pattern. Numerous rear and side gardens in the district are present and continue to be integral to the Asian American community. Upon the completion of the first building, members of the community copied the style and many of the buildings within the district are replicas of each other. The businesses within the district consisted of stores, hotels, boarding houses, pool halls and gambling halls. This community was the only social and commercial center for Asian Americans in the 1920s in the Delta. Modern business in the buildings consist of a bank, auto repair shops, coin-operated laundry, florist, restaurant, and telephone company. The Bing Kung Tong branch office is the only building to retain its distinctly Chinese inspiration. As of the documentation for the National Register

nomination, a total of 64 buildings are recorded within the district, although only 41 were considered contributing elements to the districts.

Finding of Effect

The Chinese and Japanese Commercial Districts are eligible for the NRHP under Criteria A and C and, therefore, automatically eligible for the California Register of Historic Places (CRHR) under Criteria 1 and 3. The buildings show few alterations from their original construction, continue to contribute to the local Asian heritage and, therefore, retain integrity. The district has a period of significance between 1926 and 1941. The corrugated metal siding pressed over horizontal wooden boards and stepped, or peaked parapets are unique in design and represent the community's specific influence on design. The rear and side gardens all contribute to the *original Main Street architecture* of the commercial districts.

The Proposed Project includes the replacement of new sewer pipeline using heavy equipment to excavate trenches and backfill with native soils. All portions of the Project will remain in the ROW of existing streets, with some exceptions within private property easements and the raising of the berm on Treatment Pond #1. None of the sewer installation will cause any physical destruction to or removal of the buildings within the districts. There will be no alterations to any of the buildings, particularly the corrugated metal siding, stepped parapets, or gardens, due to open trenching in street ROW. The Project will not alter the way patrons and owners use the business and the construction period will be temporary, which will limit potential loss of commercial business. The setting in which the historic-era districts are located will be temporarily altered due to modern equipment and new paving, but that alteration will be temporary and will not diminish the historical setting of the Asian community. All sewer installation-related construction will be temporary, and the streets will be returned to their original appearance upon Project completion. The districts do not contain street-related contributing elements such as lamps, curbs, or sidewalks. None of the aspects of integrity of location, association, materials, workmanship, design, or feeling of the districts will be affected by the sewer installation or upgraded equipment at the WWTF. Therefore, the Project will result in no adverse effect to the Historic Property (for Section 106) or significant impact to the Historical Resource.

Southern Pacific Railroad Grade (P-34-5111)

This historic-era resource consists of two earthen berms on either side of Georgiana Slough. The berms supported the tracks of the Southern Pacific Railroad. This portion of the recorded resource is located outside of the Project Area; however, the historic route of the railroad passed through the Project Area on what is now known as 6th Street, as depicted on the 1952 Isleton, California USGS historic topographic map. The route of the railroad through the Project Area is identified as abandoned on the 1978 Isleton, California USGS historic topographic map.

ECORP revisited the portion of the railroad in the Project Area and found the former route paved with asphalt. The paved road measures approximately 16 feet wide and 1.1 miles in length. All elements of the railroad have been altered; therefore no integrity remains and the Project will not adversely impact the railroad. Therefore, P- 34-5111 was noted but not updated for the purposes of this cultural resource investigation.

Tribal Cultural Landscape (P-34-5225)

This resource roughly encompasses the environment of the entire Lower Sacramento River within Sacramento County. This landscape was referred to as *Hoyo Sayo/Tah Sayo (*United Auburn Indian Community [UAIC]) by the Nisenan and the Plains Miwok as *Waka-ce/Waka-Ly* (Wilton Rancheria). The elements that define this landscape consist of the "waterways, tule habitat, fisheries and other wildlife." The local indigenous tribes traditionally used the materials of this area and continue to use them to create "traditional structures, clothing and watercraft". The Sacramento River and its surrounding environment is also featured in traditional stories, such as how fire was acquired and how Salmon gained its color.

Tremaine and Associates (2018) evaluated this resource as eligible for the NRHP under Criterion A and CRHR under Criterion 1. However, consultation with the USACE and State Historic Preservation Officer (SHPO) on other projects along the river has failed to locate any federal agency concurrence on this resource or its eligibility. The land within the Project Area, while technically partially within the corridor of the recorded cultural landscape, has been heavily modified through agricultural and rural residential land use over a long period of time and does not appear to exhibit the characteristics of the landscape as described in the site record and may not be a contributor to that landscape. It is more likely that this landscape retains integrity much closer to the Sacramento River, and that the boundary, as mapped by the CHRIS, is somewhat arbitrary; however, Tribal consultation under applicable laws will determine this. A DPR 523 update form for P-34-5225 was not created as a result of this study.

Newly Recorded Resources

Historic Roads in the City of Isleton (IW-01)

The Project Area is located within the roadway of several historic-era roads. All historic-era roads within the Project Area are recorded as a single plat for the purposes of this Project. IW-01 consists of 17 historic-era roads in the City of Isleton that were constructed between 1910 and 1964. The roads are paved and range from 12 to 15 feet in width. Historic-era and contemporary residences and buildings are located along them. The roads are oriented east-west and north-south. IW-01 includes segments of the following roads: Goswell Road, F Street, D Street, 5th Street, A Street, Jackson Boulevard and extension, Delta Avenue, 4th Avenue, Miner Court, Wilson Park, Andrus Court, H Street, Union Avenue, Main Street, G Street, 4th Street, and 3rd Avenue. Based on historic topographic maps and aerial photographs:

by 1910, Fifth Street, A Street and Jackson Boulevard and extension were present;

by 1952, H Street, Union Avenue, Main Street, G Street, the northern segment of Goswell Road,

the northern segment of F Street, the northern segment of D Street and Delta Avenue were present;

by 1957, Fourth Street, the southern segment of Goswell Road, the southern segment of F Street, and the southern segment of D Street were present;

by 1968, the western half of Third Avenue and the entirety of Fourth Avenue were present;

by 1970, Miner Court was present; and

by 1974, Andrus Court at Wilson Park was present.

Evaluation

Because all historic-era roads in the City of Isleton possess common histories and share similar design characteristics with comparable integrity considerations, the following evaluation applies to all historic-era roads in the Project Area. The evaluation below considers the roads as a single resource, IW-01, recognizing that the roads are best considered as a single plat. However, the evaluation also includes statements of individual eligibility to ensure adequate coverage of historical considerations for the roads.

The roads in the City of Isleton functioned primarily as local roads providing vehicular access to commercial buildings and residences. The roads are oriented in the traditional north-south and east-west directions, which direct motorists to main throughfares, such as SR-160 and Jackson Boulevard. This hierarchy of roads evident in the City of Isleton was a common feature of historic-era towns built in the Central Valley of California during the late 1800s. Its usage at the City of Isleton does not represent a significant contribution to the broad patterns of our history at the local, state, or national level. Therefore, the group of roads in the City of Isleton are not eligible under NRHP Criterion A or CRHR Criterion 1. The City of Isleton directed the construction of the roads and streets throughout the small town. No single individual is associated with the history of the roads and streets; therefore, they do not represent an association with the lives of persons significant in our past. The roads recorded in the City of Isleton are not eligible under NRHP Criterion B or CRHR Criterion 2.

The roads in the City of Isleton possess design features consistent with historic-era towns established in the Sacramento Valley. Many of the neighborhood's roads ended in T-intersections, a design feature consistent with FHWA recommendations intended to slow traffic on local roads. They possess no unique design or engineering characteristics. Therefore, the roads in the City of Isleton neither embody the distinctive characteristics of a type, period, or method of construction, nor represent whose components may lack individual distinction. They are not eligible under NRHP Criterion C or CRHR Criterion 3.

The information potential in historic roads lies in their alignment and route. The alignment and route of some roads may not have been accurately mapped in historic times and therefore are not represented in the archival record. Many rural historic roads exist only on historic maps as approximated lines. Were it not for a physical presence in the landscape, we would have no accurate record of their connectivity between two locations. The roads in the City of Isleton, however, are recorded accurately on a variety of maps; thus, the information regarding the historical routes is provided in the archival record. They have not yielded, and are not likely to yield, information important to history or prehistory. Therefore, they are not eligible under NRHP Criterion D or CRHR Criterion 4.

The National Park Service (NPS) identifies seven aspects of integrity that indicate a property's ability to convey significance achieved during a period of significance. The roads in the City of Isleton retain integrity of location as they remain in the same place as depicted on topographic quadrangle maps as early as 1910. The roads also retain integrity of design, materials, and workmanship as they remain two-lane 60-foot-wide roadways. The groups of roads also retain integrity of feeling and setting, as they remain situated in a rural historic-era town. The surrounding area conveys the aesthetic sense of the early development of Isleton.

Regardless of integrity, due to lack of historical significance, the roads in the City of Isleton, recorded as IW-01, do not meet the eligibility criteria for inclusion in the NRHP or CRHR as a single road plat or as individual resources and do not contribute to any known or suspected district.

Resources Noted

The following resources were noted during the survey, but were not recorded because they will not be impacted by the project and, therefore, are considered outside of the APE or Project Area.

Wilson Park

Wilson Park, located south of Jackson Boulevard and west of Andrus Court, appears in aerial photographs from 1974. The park includes a baseball diamond with recent upgrades, bleachers, and a playground. ECORP found the park well-maintained with short, regularly trimmed grasses. This resource is noted, but not recorded, as it lies outside of the APE or Project Area.

Isleton Mobile Home and RV Park and Apartments

The Isleton Mobile Home and RV Park and Apartments first appears on the 1952 (photo revised 1968) Isleton topographic map. The apartments and mobile home park occupy approximately 2.3 acres and include 37 locations for mobile homes, associated ancillary structures, and sheds. Some mobile homes exhibit new upgrades. The Project will include sewer installation within the roadways within the mobile home park, adjacent to the hotel, but the structures are outside of the Project Area. Additionally, the Isleton Mobile Home Park and Apartments changed its name to Isleton Mobile Home & RV Park in mid-2021.

Isleton Wastewater Treatment Plant Leach Fields and Corporate Yard

Structures associated with the Isleton wastewater corporate yard are first depicted on the 1968 photo revised version of the 1952 Isleton topographic quadrangle. These original structures consist of the main office and associated building. A sign on both structures reveals that the structures date to 1956. The leach fields and rest of the structures associated with the plant are depicted on the 1978 Isleton topographic quadrangle (Figures 12 and 13). The Project will include sewer installation within the roadways of 6th Street but will not directly or indirectly impact these resources. The Project includes equipment upgrades at the WWTF and consists of installation of a new backup generator, new aerators, blowers, and other electrical equipment that are required. There will be no impact to the WWTF.

Distribution and Telephone Line

A distribution line parallels 6th Street and continues beyond the Project Area in both the north and south directions. It first appears on the 1952 Isleton USGS topographic map. ECORP observed that the line is constructed with wooden poles. It exhibits characteristics of regular maintenance as evidenced by metal elements that have replaced ceramic insulators. This resource is located outside of the Project Area.

Conclusions

The cultural resources investigation identified three previously recorded resources within the Project Area: the Isleton Chinese and Japanese Commercial District (P-34-2351), which is listed in the NRHP (# HRI-5641-006-9999); a segment of the Southern Pacific Railroad (P-34-5111); and a Tribal Cultural Landscape encompassing a corridor of the Lower Sacramento River from the confluence with the Mokelumne River to the confluence with the Feather River (P-34-5225). One newly recorded resource (IW 01), a road plat, was also recorded within the Project Area. In addition, four newly identified resources (Wilson Park, Isleton wastewater leach fields and corporate yard, Isleton Mobile Home Park and Apartments, and a distribution line) were noted but not recorded because they were determined to not be within the Project Area or APE.

The Chinese and Japanese Commercial Districts (P-34-2351) is listed on the NRHP under Criteria A and C and CRHR under Criteria 1 and 3 (NRHP #HRI-5641-006-9999). ECORP applied the criteria of adverse effects to the districts and concluded that there will be no adverse effect to the Historic Property (under Section 106 of the NHPA) or significant impact to the Historical Resource (under CEQA) as a result of the Proposed Project.

ECORP evaluated the historic-era roads within the Project Area, recorded as IW-01, against the eligibility criteria for the NRHP and CRHR and found that they are not eligible under any criteria.

The remaining previously recorded resources (P-34-5111 and P-34-5225) and newly noted resources (Wilson Park, Isleton wastewater leach fields and corporate yard, distribution line, and Isleton Mobile Home Park and Apartments) were noted but not addressed further because they are not within the Project Area or APE.

A moderate potential exists for buried pre-contact archaeological sites in the Project Area due to the presence of alluvium along the Sacramento River given the likelihood of pre-contact archaeological sites located along perennial waterways. However, given the disturbance caused by the existing sewer lines and other infrastructure within the Project Area, the likelihood is reduced to a moderate potential for encountering intact buried archaeological sites. In any case, the potential always remains for ground-disturbing activities to expose previously unrecorded cultural resources. As such, Mitigation Measure CUL-1 is required to reduce potential historic resource impacts to the less than significant level.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

No prehistoric/archaeological resources were identified within the Project Area. However, due to the presence of alluvium along the Sacramento River, and given the likelihood of pre-contact archaeological

sites to be located along perennial waterways, there exists the potential for buried pre-contact archaeological sites in the Project Area.

Additionally, in response to Native American tribal consultation requests about the Project, completed as a part of the CEQA process, the Northern Valley Yokut/Ohlone/Patwin requested in a January 5, 2023 correspondence that the Project be monitored by a tribal monitor because the area is known to be sensitive for inadvertent discoveries of burial sites. As such, Mitigation Measures CUL-1 and CUL-2 are required to reduce potential archaeological resource impacts to the less than significant level.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

A search of the Sacred Lands File by the NAHC indicated that there is the potential for Native American cultural resources in the Project Area. ECORP notified 18 Native American tribes about the Project on December 13, 2022; the Northern Valley Yokut/Ohlone/Patwin responded on January 5, 2023 requesting that the Project be monitored by a tribal monitor because the area is known to be sensitive for inadvertent discoveries of burial sites. No known burial sites were identified during the field survey. Although Native American burial sites were not identified in the Project Area, there is a possibility that unanticipated human remains will be encountered during ground-disturbing project-related activities. Therefore, impacts to unknown human remains would be less than significant with incorporation of Mitigation Measures CUL-1 and CUL-2.

4.5.6 Mitigation Measures

CUL-1: **Protection of Unknown Cultural Resources.** If subsurface deposits believed to be cultural or human in origin are discovered during grading and construction activities, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately, and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the City. The City, with assistance from the professional archaeologist, shall consult on a finding of eligibility and implement appropriate

treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

- If the find includes human remains, or remains that are potentially human, the City, with assistance from the professional archaeologist, shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sacramento County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, Section 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Section 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Timing/Implementation: *Prior to and during construction*

Monitoring/Enforcement: *City of Isleton*

CUL-2: **Tribal Monitoring.** One tribal monitor from a culturally affiliated consulting Native American tribe (Northern Valley Yokut/Ohlone/Patwin) shall be retained by the City to monitor all vegetation clearing and removal, and all initial ground-disturbing activity within the Project Area. Tribal monitoring is not required during above-surface construction activities, installation of equipment or facilities into excavated areas, or during backfilling, recontouring, or revegetation.

The tribal monitor shall have the authority to temporarily pause ground disturbance within 50 feet of the discovery for a duration long enough to examine potential TCRs that may become unearthed during the activity. If no TCRs are identified, construction activities shall proceed and no agency notifications are required. In the event that a TCR is identified, the

monitor shall flag off the discovery location and notify the City of Isleton immediately to consult on appropriate treatment.

Timing/Implementation: *During vegetation clearing and removal, and all initial ground disturbing activity*

Monitoring/Enforcement: *City of Isleton*

4.6 Energy

4.6.1 Environmental Setting

4.6.1.1 Introduction

Energy consumption is analyzed in this IS due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (i.e., oil, natural gas, coal).

4.6.1.2 Electricity Services

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (California Energy Commission [CEC] 2021a). Pacific Gas & Electric Company (PG&E) provides electricity and natural gas to the City of Isleton. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern two-thirds of California, from Bakersfield and Barstow to near the Oregon, Nevada and Arizona state lines. It provides 5.2 million people with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from Greenhouse Gas (GHG) emission-free sources, including renewables, nuclear, and hydropower.

The California Public Utilities Commission (CPUC) regulates PG&E. The CPUC has developed energy efficiency programs such as smart meters, low-income programs, distribution generation programs, self-generation incentive programs, and a California solar initiative. Additionally, the CEC maintains a power plant data base that describes all of the operating power plants in the state by county. Sacramento County, which encompasses the City of Isleton and the Project Site, contains 47 power plants generating electricity, of which 38 are solar-powered, five are natural gas-fired, two are hydro-powered, and two are biomass-fired (CEC 2021a).

4.6.1.3 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh). Vehicle fuel use is typically measured in gallons (i.e., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all land uses in the County of Sacramento from 2016 to 2020 is shown in Table 4.6-1. As indicated, the demand has slightly increased since 2016.

Table 4.6-1. Electricity Consumption in Sacramento County 2016-2020	
Year	**Electricity Consumption (kilowatt hours)**
2020	11,063,247,071
2019	10,919,949,326
2018	10,918,809,841
2017	11,392,782,662
2016	10,831,571,488

Source: CEC 2021c

The natural gas consumption associated with all uses in Sacramento County from 2016 to 2020 is shown in Table 4.6-2. As indicated, the demand has increased since 2016.

Table 4.6-2. Non-Residential Natural Gas Consumption in Sacramento County 2016-2020	
Year	**Natural Gas Consumption (therms)**
2020	298,393,458
2019	311,789,943
2018	305,292,156
2017	308,776,987
2016	287,660,312

Source: CEC 2021c

Total automotive fuel consumption in Sacramento County from 2017 to 2021 is shown in Table 4.6-3. As shown, both on-road consumption and off-road consumption has increased since 2017.

Table 4.6-3. Automotive Fuel Consumption in Sacramento County 2017-2021	
Year	**Fuel Consumption (gallons)**
2021	670,501,350
2020	559,695,365
2019	687,314,710
2018	638,793,555
2017	682,656,215

Source: CARB 2021a

4.6.2 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐

Less Than Significant Impact.

Operations of the Proposed Project would not result in the consumption of electricity or natural gas and thus, would not contribute to the Countywide usage. The one source of energy associated with the Project includes the equipment fuel necessary for construction. For the purpose of this analysis, Project increases in construction fuel consumption are compared with the countywide fuel consumption in 2021, the most recent full year of data. The amount of total construction-related fuel used was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1.

Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use. For the purposes of this analysis, the amount of fuel necessary for Project construction is calculated and compared to that consumed in Sacramento County.

Table 4.6-4. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumed	Percentage Increase Countywide
Vehicular/Equipment Fuel Consumption		
Project Construction	49,655 gallons	0.007

Notes: The Project increase construction-related fuel consumption is compared with the countywide construction-related fuel consumption in 2021, the most recent full year of data.
Source: Climate Registry 2016, Appendix C.

As shown in Table 4.16-4, the Project's gasoline fuel consumption during the construction period is estimated to be 49,655 gallons of fuel, which would increase the annual construction-related gasoline fuel use in the County by 0.007 percent during Project construction. As such, Project construction would have a nominal effect on local and regional energy supplies, especially over the long term. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the

Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Operations of the Project would not generate any fuel consumption as it would not be contributing to any mobile sources. As such, fuel consumption associated with vehicle trips generated by the Project during operation would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

For these reasons, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

No Impact.

The Proposed Project is for the implementation of sewer improvements within the City. It does not conflict with or obstruct a plan for renewable energy or energy efficiency. No impact would occur.

4.6.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Environmental Setting

4.7.1.1 Geomorphic Setting

The Project Site is located in the west-central portion of the Great Valley geomorphic province of California. The Great Valley is an alluvial plain about 50 miles wide and 400 miles long in the central part of California. Its northern part is the Sacramento Valley, drained by the Sacramento River and its southern part is the San Joaquin Valley drained by the San Joaquin River. The Great Valley is a trough in which sediments have been deposited almost continuously since the Jurassic (about 160 million years ago). Great oil fields have been found in southernmost San Joaquin Valley and along anticlinal uplifts on its southwestern margin. In the Sacramento Valley, the Sutter Buttes, the remnants of an isolated Pliocene volcano, rise above the valley floor (California Geological Survey [CGS] 2002).

Site Geology

According to the Geologic Map of California (CGS 2016), the Project site is underlain by the Quaternary Alluvium. The geology is made up of alluvium, lake, playa, and terrace deposits, which are unconsolidated and semi-consolidated.

Site Soils

According to the NRCS through the Web Soil Survey database, the Project Site is composed of four soil units: Rindge mucky silt loam, Sailboat silt loam, Sailboat- Urban land complex, and Scribner clay loam, as shown in Table 4.7-1. The Web Soil Survey also identifies drainage, flooding, erosion, runoff, and the linear extensibility potential for the Project soils. According to this survey, the major portion of Project soils, Sailboat-Urban land complex, at 88.5 percent, is somewhat poorly drained, has a high runoff potential, and has a rare potential for flooding. This soil has a slight erosion potential and a low linear extensibility (shrink-swell) (NRCS 2022).

Table 4.7-1. Project Area Soil Characteristics

Soil Name, Symbol	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard[1]
Rindge mucky silt loam, partially drained, 0 to 2 percent slopes, MLRA 16, 201	3.7%	Very poorly drained	Rare	Slight
Sailboat silt loam, partially drained, 0 to 2 percent slopes, MLRA 16, 206	0.3%	Somewhat poorly drained	Rare	Slight
Sailboat- Urban land complex, partially drained, 0 to 2 percent slopes, MLRA 17, 209	88.5%	Somewhat poorly drained	Rare	Slight
Scribner clay loam, partially drained, 0 to 2 percent slopes, MLRA 16, 222	7.5%	Poorly drained	Rare	Slight
	Runoff Potential[2]	**Linear Extensibility (Rating)[3]**	**Frost Action[4]**	
Rindge mucky silt loam, partially drained, 0 to 2 percent slopes, MLRA 16, 201	A/D Low-(high)	3.7% (moderate)	None	
Sailboat silt loam, partially drained, 0 to 2 percent slopes, MLRA 16, 206	C (high)	2.3% (low)	None	
Sailboat- Urban land complex, partially drained, 0 to 2 percent slopes, MLRA 17, 209	C (high)	2.3% (low)	None	
Scribner clay loam, partially drained, 0 to 2 percent slopes, MLRA 16, 222	C (high)	3.6% (moderate)	None	

Source: NRCS 2022

Notes:

1. The ratings are both verbal and numerical. The hazard is described as *slight*, *moderate*, *severe*, or *very severe*. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and offsite damage are likely, and erosion-control measures are costly and generally impractical.

2. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation.
   Group A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet.
   Group B: Soils having a moderate infiltration rate when thoroughly wet.
   Group C: Soils having a slow infiltration rate when thoroughly wet.
   Group D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.
3. Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3%, moderate if 3 to 6%, high if 6 to 9%, and very high if more than 9%. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.
4. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Regional Seismicity and Fault Zones

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The Board defined an active fault as one that has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term *sufficiently active* was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term well-defined, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (CGS 2010).

According to the DOC Data Viewer interactive mapping program (DOC 2022b), the closest earthquake faults to the Project Site are the Midland and Rio Vista faults, both listed as Quaternary-era faults, both within 3 to 4 miles of the City.

The closest active fault (movement within the last 35,000 years) near the Project Site is the Concord fault. The Concord fault, running north to south, is roughly located between Concord and Martinez/Pleasanton. This fault is a Historic-era fault and is approximately 27 miles west of Isleton (DOC 2022b).

Paleontological Resources

ECORP completed a search of the University of California Museum of Paleontology (UCMP) paleontological records on July 13, 2022. The search included a review of the institution's paleontology specimen collection records for Sacramento County, including the Project Area and vicinity. In addition, ECORP conducted a query of the UCMP catalog records, a review of regional geologic maps from the California Geological Survey, a review of local soils data, and a review of existing literature on paleontological resources of Sacramento County to determine the sensitivity of the Project Area, if occurrences of paleontological resources are present within or immediately adjacent to the Project Area, and if implementation of the Project could result in significant impacts to paleontological resources.

Paleontological resources include mineralized (fossilized) or unmineralized bones, teeth, soft tissues, shells, wood, leaf impressions, footprints, burrows, and microscopic remains.

The results of the search of the UCMP indicated 13 paleontological specimens were recorded from 12 identified localities and one unidentified localities in Sacramento County. Paleontological resources in Sacramento County include fossilized remains of vertebrates and invertebrates (UCMP 2022).

4.7.2 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒

a) Less Than Significant Impact.

i) No Impact.

The Proposed Project Site is not located within an Alquist-Priolo Earthquake Zone (DOC 2022b). There would be no impact related to fault rupture.

ii) Less Than Significant Impact.

The USGS web-based Unified Hazard Tool was used to estimate the Peak Ground Acceleration (PGA) and mean and modal (most probable) magnitude associated with a 2,475-year return period that corresponds to an event with two percent chance of exceedance in 50 years. The USGS estimated PGA is 0.397 g and Seismic Site Class B/C (Shear Wave Velocity (=760 m/sec) based on a recent 2014 model within the application (USGS 2014). The Class B/C correlates to moderate to strong shaking and is defined by the Federal Emergency Management Agency (FEMA) as follows:

> Moderate shaking—Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.

Strong shaking—Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built structures (FEMA 2022).

The Project entails the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. All new infrastructure would be required to comply with the current City code, including any required seismic mitigation standards. Because of the required compliance with seismic mitigation standards, the Proposed Project would have a less than significant impact related to strong ground shaking.

iii) Less Than Significant Impact.

Liquefaction occurs when loose sand and silt saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:

Loss of bearing strength – soils liquefy and lose the ability to support structures,

Lateral spreading – soils slide down gentle slopes or toward stream banks,

Flow failures – soils move down steep slopes with large displacement,

Ground oscillation – surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking,

Flotation – floating of light buried structures to the surface,

Settlement – settling of ground surface as soils reconsolidate, and

Subsidence – compaction of soil and sediment.

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. DOC provides mapping for area susceptible to liquefaction in California. According to this mapping, the Project is not located in an area of liquefaction (DOC 2022b). As such, the Proposed Project would result in less than significant impacts with regard to seismic-related ground failure, including liquefaction.

iv) No Impact.

The Project site and surrounding area is flat with no steep hillsides or other formations susceptible to landslides. As such, the Proposed Project would have no impact for the potential for landslides.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Less Than Significant Impact.

As shown in Table 4.6-1, the Project soils have a slight erosion potential. Construction activities during the Project would disturb soils and potentially expose them to wind and water erosion. Because the Project involves more than 1 acre in area, the Project will be required to prepare a SWPPP to comply with the RWQCB's General Construction Storm Water Permit. The SWPPP includes BMPs and would be implemented to manage erosion and the loss of topsoil during construction-related activities (Section 4.10.2). Implementation of the Project's erosion control measure and any additional required BMPs would reduce soil erosion impacts to a less than significant impact.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less Than Significant Impact.

As discussed previously, the Project Site has no potential for landslides.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other *free* face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. One indicator of potential lateral expansion is frost action. Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing (NRCS 2022). As indicated in Table 4.6-1, the Web Soil Survey identifies the Project site as having soils with no frost action potential. Additionally, as discussed in Item a) iii) above, the Project site is not identified as being in an area with a potential for liquefaction. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.[3] No oil, gas, or high-volume water extraction wells are known to be present in the Project Area. According to the United States Geological Service (USGS), the Project site is located in an area of land subsidence because of peat loss (USGS 2022). The Project is the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. All new

[3] The processes by which loose sediment is hardened to rock are collectively called lithification.

infrastructure would be required to comply with the current city code, including any required subsidence measures. As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils will settle without any additional applied pressure when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil. The Project is the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. No large buildings or structures resulting in enormous weight and pressure on the soil surface are a part of the Proposed Project. As such, the Project Site soils would not become unstable as a result of the Project. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact.

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. Expansive soils can be determined by a soil's linear extensibility. There is a direct relationship between linear extensibility of a soil and the potential for expansive behavior, with expansive soil generally having a high linear extensibility. Thus, granular soils typically have a low potential to be expansive, whereas clay-rich soils can have a low to high potential to be expansive. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent, moderate if 3 to 6 percent, high if 6 to 9 percent, and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in Table 4.6-1, linear extensibility values for the site are from 2.3 to 3.6 percent. Soils with linear extensibility in that range correlate to soils having a low to moderate expansion potential. No buildings or structures are a part of the Proposed Project and the pipelines are designed to allow for some lateral movement. As such, the Proposed Project would not create a substantial risk to life or property. The Project would have a less than significant impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

No Impact.

The Project does not involve the development of a septic system to process wastewater. As such, the Project would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

No paleontological resources sites were identified in the Project Area by the UCMP search. However, there is a possibility that unanticipated paleontological resources will be encountered during ground-disturbing Project-related activities. Therefore, mitigation is required to reduce this potential impact. As such, Mitigation Measure GEO-1 is included to reduce impacts to unknown paleontological resources to a less than significant level.

4.7.3 Mitigation Measures

GEO-1 If paleontological or other geologically sensitive resources are identified during any phase of project development, the construction manager shall cease operation at the site of the discovery and immediately notify the City of Isleton Public Works. The City shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less than significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the Project Site while mitigation for paleontological resources is carried out.

Timing/Implementation: *During construction*

Monitoring/Enforcement: *City of Isleton Public Works*

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

GHG emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as CO_2, methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps more than 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in Carbon Dioxide Equivalents (CO_2e). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

The SMAQMD is the local air quality agency regulating the Sacramento County portion of the SVAB. State law does not specify an explicit role for local air districts with respect to implementing statewide GHG reduction strategies, but it does state that CARB will work actively with air districts in coordinating emissions reporting, encouraging and coordinating GHG reductions, and providing technical assistance in quantifying reductions. The ability of air districts to control emissions (both criteria pollutants and GHGs) is provided primarily through permitting, but also via their role as a CEQA lead or commenting agency, the establishment of CEQA thresholds, and the development of analytical requirements for CEQA documents. The SMAQMD has recommended an approach for assessing a proposed development's GHG emissions. Specifically, SMAQMD recommends a comparison of a project's annual construction and operational GHG emissions to a significance threshold of 1,100 metric tons per year.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

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?	☐	☐	☒	☐

Less Than Significant Impact.

The Project is compared to the SMAQMD GHG significance thresholds for construction and operations. The SMAQMD has developed and adopted an update to its land development project GHG thresholds, which require a project to demonstrate consistency with CARB's *2017 Climate Change Scoping Plan*. The significance threshold for the construction phase is 1,100 metric tons of CO_2e per year. With regard to

operational emissions, the SMAQMD's technical support document, *SMAQMD Greenhouse Gas Thresholds for Sacramento County* (2020b), identifies operational measures that should be applied to all projects estimated to exceed a screening level threshold of 1,100 metric ton of CO_2e annually in order to demonstrate consistency with the 2017 Climate Change Scoping Plan. The measures target GHG emissions inventory areas where state measures did not fully achieve reductions, allowing for local supportive measures.

4.8.2.1 Construction Impacts

A potent source of GHG emissions associated with the Proposed Project would be combustion of fossil fuels during construction activities. Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 4.8-1 illustrates the specific construction generated GHG emissions that would result from construction of the Project. The generation of these GHG emissions would cease once construction is complete.

Table 4.8-1. Construction-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/Year)
Construction	504
SMAQMD Potentially Significant Impact Threshold	*1,100*
Exceed SMAQMD Regional Threshold?	**No**

Source: RCEM version 9.0.0. Refer to Attachment A for Model Data Outputs.
Notes: Emission calculations account for the import of 3,000 cubic yards of soil, export of 2,000 cubic yards of soil, import of 2,000 cubic yards of asphalt material and export of 2,000 cubic yards of asphalt material during Project implementation.

As shown in Table 4.8-1, Project construction would result in the generation of approximately 504 metric tons of CO_2e over the course of construction, which is below the significance threshold of 1,100 metric tons of CO_2e. The generation of these GHG emissions would cease once construction is complete.

4.8.2.2 Operations

Operational GHG emissions impacts are long-term air emissions impacts that are associated with any changes in the permanent use of the Project Site by onsite stationary and offsite mobile sources that substantially increase emissions. The Project proposes necessary upgrades to the City of Isleton's Wastewater Treatment System. Once upgrades are complete it would not be a greater source of operational GHG emissions beyond current conditions. Therefore, Proposed Project operations would not contribute to GHG emissions.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

No Impact.

The State of California promulgates several mandates and goals to reduce statewide GHG emissions, including the goals to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 (Senate Bill 32) and 80 percent below 1990 levels by 2050 (Executive Order [EO] S-03-05). The SMAQMD supports state policies to reduce levels of GHG emissions through its significance thresholds, and the Proposed Project would comply with the SMAQMD's numeric, bright-line GHG threshold of 1,100 metric tons of CO_2e per year, which was developed in consideration of statewide GHG reduction goals. Furthermore, the Project would not include new permanent sources of GHG emissions and would not generate new or unplanned permanent GHG emissions. Therefore, the Project would not interfere with the state's goals of reducing GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, as established in Senate Bill 32 and EO S-03-05.

Furthermore, the Proposed Project would comply with the State Building Code provisions designed to reduce GHG emissions during construction. During construction, the Project would utilize equipment in compliance with CARB requirements. Mobile sources during construction would be subject to the requirements of California AB 1493 (Pavley Standards), the Advanced Clean Cars Program, and the Low Carbon Fuel Standard Regulation. Additionally, the Project would be designed and constructed consistent with California Title 24 and CALGreen (2019). These regulations require projects to comply with specific standards related to energy efficiency construction practices.

For these reasons, the Project would not conflict with any applicable plan, policy or regulation related to the reduction in GHG emissions.

4.8.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, Section 25501 as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the

> environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in Title 22, Section 662601.10, of the CCR as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

The release of hazardous materials into the environment could potentially contaminate soils, surface water, and groundwater supplies.

Most hazardous materials regulation and enforcement in Sacramento County, including those in Isleton, is managed by the Sacramento County Environmental Management Department. The Department is responsible Hazardous Materials Business Plan (HMP) Program, which is one program element within the Sacramento County Certified Unified Program Agency. The HMP Program is administered throughout the County of Sacramento and its incorporated cities. The purpose of the HMP Program is to protect public health and the environment and groundwater from risks or adverse effects associated with the storage of hazardous materials. Businesses must complete a Hazardous Materials Business Plan for the safe storage and use of chemicals.

Under Government Code Section 65962.5, both the California Department of Toxic Substance Control (DTSC) and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the DTSC (2022) and SWRCB (2022) lists identified four open cases of hazardous waste violations within the City of Isleton. These are shown in Table 4.9-1.

Table 4.9-1: Open Hazardous Materials Clean Up Sites - City of Isleton

Site Name	Address	Site Type	Status
Abandoned Gas Station	3 Main Street	LUST Cleanup Site	Open - Site Assessment
Lindsay Olive Oil Company	Jackson Boulevard	Cleanup Program Site	Open - Inactive
Ramos Oil Bulk Facility	Highway 160 at 1st Street	Cleanup Program Site	Open – Remediation
Vega Property (Former Gasoline Station)	208 2nd Street	LUST Cleanup Site	Open - Site Assessment

Source: SWRCB 2022

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

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?	☐	☐	☒	☐

Less Than Significant Impact.

The Project includes the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. None of these uses require the routine transport, use, or disposal of hazardous materials. Proposed Project is anticipated to require the use of some hazardous materials such as diesel fuel and oil for construction vehicles/equipment used during construction. However, these materials would be stored in gas tanks and other containers designed for this use. As such, this use would have a less than significant impact.

Once construction is completed, the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials as none will be required to operate the Project. Therefore, the Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact.

As discussed in Issue a), the Project would not result in the routine transport, use, disposal, handling, or emission of any hazardous materials that would create a significant hazard to the public or the environment. Potential construction-related hazards could be created during the course of Project construction at the site, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

Because no hazardous materials would be used for operation of the Project, short-term construction and long-term operation impacts associated with handling, storing, and disposing of hazardous materials from project operation would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

Less Than Significant Impact.

Portions of the Project are adjacent to the Isleton Elementary School. However, none of the proposed new uses would emit any hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. The Project would have a less than significant impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact.

Under Government Code Section 65962.5, both the DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. As identified in Table 4-9.1, a search of the DTSC and SWRCB lists identified four open cases of hazardous waste violations on the Project Site. The Project includes the replacement of sewer lines in the street ROW adjacent to two of the sites, identified by the SWRCB as the Lindsay Olive Oil Company and the abandoned gas station. However, the Project involves the use of a parcel included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Nor would the Project result in significant hazard to the public or the environment because of the replacement of sewer lines near the identified sites. As a result, the Project would have a less than significant impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

No Impact.

The nearest public airport to the Project site is the Rio Vista Municipal Airport, located approximately 5.5 miles northwest of the site. According to the Solano County Airport Land Use Compatibility Plan for the Rio Vista Airport (2018), the Proposed Project is located within the Airport Influence Area but not within any land compatibility, overflight, or noise zones (Solano County 2022). The Project is the replacement of sewer lines, reconnection of storm drain lines, and minor improvements to the WWTF. Implementation of the Project would not affect airport operations or result in airport safety hazards. As such, the Project would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Less Than Significant Impact.

The Proposed Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. While Project construction would involve construction activities within a street ROW, these will be identified by the City ahead of construction and alternative emergency and evacuation routes would be adjusted accordingly. Implementation of the Proposed Project would result in a less than significant impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒

No Impact.

The risk of wildfire is related to a variety of parameters, including fuel loading (i.e., vegetation), fire weather (i.e., winds, temperatures, humidity levels and fuel moisture contents), and topography (i.e., degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area to mass ratio and require more heat to reach the ignition point.

The City lies in an area of low wildfire risk, according to California Department of Forestry and Fire Protection (CAL FIRE, 2007). The Project is the replacement of sewer lines, reconnection of storm drain lines, and minor improvements to the WWTF. Implementation of the Proposed project would have no impact with regards to wildland fires.

4.9.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Regional Hydrology

Surface Water

The Project site is located in the greater Sacramento River hydrologic region. The Sacramento River hydrologic region covers approximately 17.4 million acres (27,200 square miles). The Sacramento River Hydrologic Region includes the entire California drainage area of the Sacramento River (the state's largest river) and its tributaries. The region extends from Chipps Island in Solano County north to Goose Lake in Modoc County. It is bounded by the Sierra Nevada on the east, the Coast Ranges on the west, the Cascade and Trinity mountains on the north, and the Sacramento-San Joaquin River Delta (Delta) on the south. The Sacramento River Basin actually begins in Oregon, north of Goose Lake, a near-sink that intercepts the Pit River drainage at the California-Oregon border. The region includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Sacramento, Colusa, Sutter, Yuba, Sierra, Nevada, Siskiyou, Sacramento, El Dorado, Yolo, Solano, Lake, and Napa counties. Small areas of Alpine and Amador counties are also within the region (Department of Water Resources [DWR] 2013).

The Project is located within the Threemile Slough-Sacramento River Watershed (USEPA 2022). The watershed covers approximately 61,655 acres and is a part of the Lower Sacramento watershed (University of California, Davis 2022).

Groundwater

Groundwater, in the State of California is managed and monitored by the DWR. The Project site is located within boundaries of the Solano Groundwater Subbasin, which is part of the Sacramento River Hydrologic

Region. The Solano Subbasin (Basin number 5-12.66) lies in the southwestern portion of the Sacramento Basin and the northern portion of the Delta. The Solano Subbasin covers 425,000 acres (664 square miles). The elevation varies from 120 feet in the northwest corner to sea level in the south. Subbasin boundaries are defined by Putah Creek on the north, the Sacramento River on the East (from Sacramento to Walnut Grove), the North Mokelumne River on the southeast (from Walnut Grove to the San Joaquin River), and the San Joaquin River on the South (from the North Mokelumne River to the Sacramento River. The western subbasin border is defined by the hydrologic divide that separates lands draining to the San Francisco Bay from those draining to the Delta. That divide is roughly delineated by the English Hills and the Montezuma Hills. Primary waterways in and bordering the basin include the Sacramento, Mokelumne and San Joaquin rivers, the Sacramento River Deep Water Ship Channel, and Putah Creek (DWR 2004).

Project Site Hydrology and Onsite Drainage

The Project Site is located on relatively flat terrain situated at an elevational range of approximately 10 feet AMSL to 4 feet BMSL. The Sacramento River is adjacent to the Project Site and the Site is approximately 0.6 mile north of Georgiana Slough. However, there are no natural aquatic features within the Project Site. The average annual precipitation is approximately 13.22 inches (NOAA 2022). Storm drainage is controlled though the City's storm drainage system.

The FEMA Flood Insurance Rate Map (FIRM) for the Project Area (Map No. 06067C0561H and Map No. 06067C0565H) shows that the Project Site is in Zone AE, meaning that the area is in the Special Flood Hazard Area subject to 0.1 percent annual chance flood (otherwise known as the 100-year flood zone) [FEMA 2012].

4.10.2 Hydrology and Water Quality (X) Environmental Checklist and Discussion

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?	☐	☐	☒	☐

Less Than Significant Impact.

In accordance with National Pollutant Discharge Elimination System (NPDES) regulations, the State of California requires that any construction activity affecting 1 acre or more obtain a General Construction Activity Stormwater Permit (General Permit) to minimize the potential effects of construction runoff on receiving water quality. Performance standards for obtaining and complying with the General Permit are described in NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ.

General Permit applicants are required to submit to the appropriate regional board Permit Registration Documents for the Project, which include a Notice of Intent (NOI), risk assessment, site map, signed certification statement, an annual fee, and a SWPPP. The SWPPP includes pollution prevention measures

(i.e., erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, and a detailed construction timeline. The SWPPP must also include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges.

Examples of typical construction BMPs included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters. SWPPP BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater.

Implementation of BMPs required as part of the SWPPP would ensure that the Proposed Project would neither create nor contribute to any violations of water quality standards or waste discharge requirements. There would be a less than significant impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒

No Impact.

The Project includes the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. This replacement would not reduce the amount of existing groundwater recharge potential or supplies. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:	☐	☐	☐	☒
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐

a) Less Than Significant Impact.

i) No Impact.

With exception of the raising of the berm on Treatment Pond #1, the Proposed Project would restore areas affected by pipeline replacement, abandonment, and storm drainage connections to pre-Project conditions relative to topography and groundcover, to the extent practicable. The Proposed Project would not alter the drainage pattern of a stream or river as there are none within the footprint of the Project.

Further, the Project construction activities would result in soil disturbances of at least 1 acre of total land area. As such, an NPDES General Permit would be required prior to the start of construction. Excavation and grading activities associated with the Proposed Project will reduce vegetative cover and expose bare soil surfaces making these surfaces more susceptible to erosion. To comply with the requirements of the NPDES Construction General Permit, The City will be required to file a NOI with the State of California and submit a SWPPP defining BMPs for construction- and post-construction-related control of the Proposed Project site runoff and sediment transport. Requirements for the SWPPP include incorporation of both erosion and sediment control BMPs. SWPPP generally include the following applicable elements:

Diversion of offsite runoff away from the construction area,

Prompt revegetation of proposed landscaped areas,

Perimeter straw wattles or silt fences and/or temporary basins to trap sediment before it leaves the site,

Regular sprinkling of exposed soils to control dust during construction during the dry season,

Installation of a minor retention basin(s) to alleviate discharge of increased flows,

Specifications for construction waste handling and disposal,

Erosion control measures maintained throughout the construction period,

Preparation of stabilized construction entrances to avoid trucks from imprinting debris on city roadways,

Contained wash out and vehicle maintenance areas,

Training of subcontractors on general construction area housekeeping,

Construction scheduling to minimize soil disturbance during the wet weather season, and

Regular maintenance and storm event monitoring.

Note that the SWPPP is a *live* document and should be kept current by the person responsible for its implementation. Preparation of and compliance with a required SWPPP would effectively prevent Proposed Project onsite erosion and sediment transport offsite. This will reduce potential runoff, erosion, and siltation associated with construction and operation of the Proposed Project. The effects of the Proposed Project on onsite and offsite erosion and siltation, therefore, would be less than significant.

ii) Less Than Significant Impact.

Implementation of the Proposed Project would not result in the increase of the rate or amount of surface runoff in a manner that would result in flooding on- or offsite. As noted above, the Proposed Project would restore areas affected by pipeline construction to pre-Project conditions relative to topography and groundcover and would not change the drainage pattern of the area. Therefore, any impact of the Project on existing drainage would be less than significant relative to existing conditions. Therefore, the Proposed Project would have a less than significant impact on causing flooding on- or off-site.

iii) Less Than Significant Impact.

See discussion of Issues i) and ii), above. The Project would include the reconnection of an existing stormwater drainage system within the Isleton Mobile Home Park to the City's system. However, this reconnection would not exceed the capacity of the City's existing stormwater drainage systems as it was originally connected to the system and therefore considered in the capacity of the system.

Polluted runoff from the Project Site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and gross pollutants such as trash and debris. Compliance with NPDES permit requirements would ensure that BMPs would be implemented during the construction phase to effectively minimize excessive soil erosion and sedimentation and eliminate non-stormwater discharge offsite. As required by law, BMPs would be included as part of the Proposed Project to ensure that potentially significant impacts are reduced to less than significant levels. Therefore, impacts associated with stormwater volumes and polluted runoff during the construction of the Proposed Project would be less than significant.

Activities associated with operation of the Proposed Project would not contribute to stormwater flow or polluted runoff as the Project is the replacement of existing underground wastewater pipelines reconnection of an existing stormwater system, abandonment of unused pipelines, and once completed, stormwater runoff would not reach these facilities. For those portions of the Project related to WWTF improvements, these would not be affected by stormwater. Therefore, impacts during operation would be considered less than significant.

iv) Less Than Significant Impact.

FEMA flood hazard maps (Map Nos. 06067C0561H and 06067C0565H) show that the Project Site is in Zone AE and located within a 100-year flood zone. All Project improvements would be underground with the exception of the improvements to the WWTF. However, these improvements are insubstantial and would not redirect or impede flood waters. Therefore, implementation of the Proposed Project will have a less than significant impact related to impeding or redirecting flood flows.

	Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Less Than Significant Impact.

The Project Site is not located near the ocean or a lake and therefore the Project is not in a tsunami or seiche inundation zone. However, the City is protected from flooding by a levee system.

A levee failure can range from a small, uncontrolled release to a catastrophic failure. Levee failure flooding can occur as the result of prolonged rainfall and flooding. The primary danger associated with levee failure is the high-velocity flooding of those properties outside and downstream of the breach. According to the Sacramento County Draft Local Hazard Mitigation Plan Report (Sacramento County 2021a), the City and Project Site are projected from flooding by levees along the Sacramento River and the Georgiana Slough. Specifically, the City of Isleton may flood when the levees protecting Andrus, Brannan and Twitchell islands are either overtopped or fail as a result of the separate or coincidental occurrence of higher high tides and high outflow through the Delta (Sacramento County 2021a). However, while the Project Site may be subject to a flood hazard because of a levee failure, the Proposed Project's sewer and storm drainage replacement pipelines would be underground and would not be impacted as a result of a levee failure. For those Project improvements to the WWTF, these would be designed according to City, DWR, and industry standards which, in part, would limit the potential for the release of pollutants as a result of levee failure. As such, the Proposed Project would have a less than significant impact from levee failure.

Based on the discussion above, the Project would not result in the release of pollutants. There would be a less than significant impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

No Impact.

The Project site is located within the Sacramento County Groundwater Sustainability Agency Solano Subbasin and the Solano Subbasin Groundwater Sustainability Plan (Sacramento County 2021b). The Project is the replacement of underground sewer facilities and would not result in the use of groundwater. Therefore, the Project would have no effect to water quality control plans or sustainable groundwater management plan pertaining to the area. The Project would have no impact.

4.10.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.11 Land Use and Planning

4.11.1 Environmental Setting

The Project includes the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF in multiple locations within the City. While the majority of these improvements would be within the street ROW, the *City of Isleton General Plan* identifies the areas adjacent to the Project as being within the Low Density Residential (LD), Residential/Commercial (R/C), Public, Semi-Public and Private Institutional Facilities (P/Q), and Industrial (I) land use designations.

4.11.2 Land Use and Planning (XI) Environmental Checklist and Discussion

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒

No Impact.

The Proposed Project consists of the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. The majority of the proposed pipeline alignment would be within the street ROW, with the exception of two areas that will occur within the City's utility easement on private land. Replacing the existing pipeline within an 8- to12-foot-deep and 3-foot-wide trench would not divide any existing communities in the area. The Proposed Project would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

No Impact.

No rezoning or General Plan amendments area required for the Proposed Project. The Proposed Project would not conflict with any applicable land use plan, policy or regulation. As such, the Proposed Project would have no impact in this area.

4.11.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.12 Mineral Resources

4.12.1 Environmental Setting

The state-mandated Surface Mining and Reclamation Act of 1975 requires the identification and classification of mineral resources in areas within the state subject to urban development or other irreversible land uses that could otherwise prevent the extraction of mineral resources. These designations categorize land as Mineral Resource Zones (MRZ-1 through MRZ-4).

Neither the City's 2000 General Plan nor the California DOC Division of Mine Reclamation (DMR), identifies the Project Site as within a MRZ or mine site (Isleton 2000; DMR 2022).

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

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?	☐	☐	☐	☒

No Impact.

As discussed above, neither the City nor DMR identify the Project Site as having the mineral resources. Therefore, the Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

No Impact.

The Project site is not identified as a mineral resource recovery site by the City or DMR. There would be no impact in this area.

4.12.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.13 Noise

4.13.1 Environmental Setting

4.13.1.1 Noise Fundamentals

The following information was provided by the *Isleton Wastewater Treatment System Improvement Project – Noise Impact Memorandum* completed by ECORP Consulting, Inc. (2022c). This document is included as Appendix D of this IS. Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

Equivalent Noise Level (L_{eq}) is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Day-Night Average (L_{dn}) is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations.

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed (ECORP 2022c).

The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer structures is generally 30 dBA or more (ECORP 2022c) .

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high, above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

Except in carefully controlled laboratory experiments, a change of 1.0 dBA cannot be perceived by humans.

Outside of the laboratory, a 3.0-dBA change is considered a just-perceivable difference.

A change in level of at least 5.0 dBA is required before any noticeable change in community response would be expected. An increase of 5.0 dBA is typically considered substantial.

A 10.0-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Sensitive Noise Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The Project Site spans many different locations throughout Isleton, which is primarily made up of sensitive residential receptors. Virtually all aspects of Project implementation would involve construction activity occurring adjacent to these land uses.

4.13.1.2 Vibration Sources and Characteristics

Ground vibration can be measured several ways to quantify the amplitude of vibration produced, including through peak particle velocity (PPV) or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively.

Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.13.1.3 Existing Ambient Noise Environment

The City of Isleton, which encompasses the Project Site, is impacted by noise sources typical of a small, rural city. It is subject to typical neighborhood noise such as noise generated by traffic, heavy machinery, and day-to-day outdoor activities as well as noise generated from the various land uses (i.e., residential, commercial, and institutional) that generate stationary source noise. Mobile sources of noise, especially cars and trucks, are the most common source of noise in the community. No airports are located in the Isleton vicinity. The Project Site is located outside of any airport land use plan. Furthermore, the Project Site is located beyond 2 miles from any airport.

The American National Standards Institute (ANSI) Standard 12.9-2013/Part 3 *Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present* provides a table of approximate background sound levels in L_{dn}, daytime L_{eq}, and nighttime L_{eq}, based on land use and population density. The ANSI standard estimation divides land uses into six distinct categories. Descriptions of these land use categories, along with the typical daytime and nighttime levels, are provided in Table 4.13-1. At times, one could reasonably expect the occurrence of periods that are both louder and quieter than the levels listed in the table. ANSI notes, "*95% prediction interval [confidence interval] is on the order of +/- 10 dB*." The majority of the Project Area would be considered ambient noise Category 3 or 4.

Table 4.13-1. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density

Category	Land Use	Description	People per Square Mile	Typical L_{dn}	Daytime L_{eq}	Nighttime L_{eq}
				(dBA)		
1	Noisy Commercial & Industrial Areas and Very Noisy Residential Areas	Very heavy traffic conditions, such as in busy, downtown commercial areas; at intersections for mass transportation or other vehicles, including elevated trains, heavy motor trucks, and other heavy traffic; and at street corners where many motor buses and heavy trucks accelerate.	63,840	67	66	58
2	Moderate Commercial & Industrial Areas and Noisy Residential Areas	Heavy traffic areas with conditions similar to Category 1, but with somewhat less traffic; routes of relatively heavy or fast automobile traffic, but where heavy truck traffic is not extremely dense.	20,000	62	61	54
3	Quiet Commercial, Industrial Areas and Normal Urban & Noisy Suburban Residential Areas	Light traffic conditions where no mass-transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally travel at moderate speeds; residential areas and commercial streets, and intersections, with little traffic, compose this category.	6,384	57	55	49
4	Quiet Urban & Normal Suburban Residential Areas	These areas are similar to Category 3, but for this group, the background is either distant traffic or is unidentifiable; typically, the population density is one-third the density of Category 3.	2,000	52	50	44
5	Quiet Residential Areas	These areas are isolated, far from significant sources of sound, and may be situated in shielded areas, such as a small wooded valley.	638	47	45	39

Table 4.13-1. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density

Category	Land Use	Description	People per Square Mile	Typical L_{dn}	Daytime L_{eq}	Nighttime L_{eq}
				(dBA)		
6	Very Quiet Sparse Suburban or rural Residential Areas	These areas are similar to Category 4 but are usually in sparse suburban or rural areas; and, for this group, there are few if any nearby sources of sound.	200	42	40	34

Source: ANSI 2013

4.13.2 Noise (XIII.) Environmental Checklist and Discussion

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?	☐	☐	☒	☐

Less Than Significant Impact.

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise sensitive and may warrant unique measures for protection from intruding noise. The Project Site spans many different locations throughout Isleton, which is primarily made up of sensitive residential receptors. Virtually all aspects of Project implementation would involve construction activity occurring adjacent to these land uses.

4.13.2.1 Onsite Construction Noise Impacts

Construction noise associated with the Proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., site preparation, excavation, paving). Noise generated by construction equipment, including earth movers, pile drivers, and portable generators, can reach high

levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by 3 to 4 minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than 1 minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

As previously described, the City of Isleton Municipal Code states that the operation of any pile-driver, stream-shovel, pneumatic hammer, derrick, stream or electric hoist or other appliance, the use of which is attended by loud or unusual noise, any power saw, power planer, or other powered tool or appliance or saw or hammer, or other tool, so as to disturb the quiet, comfort, or repose of persons in any dwelling, hotel, apartment, or other type of residence, or of any person in the vicinity, is prohibited between the hours of 10:00 p.m. and 7:00 a.m. The Project would be required to comply with this Municipal Code requirement.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors and in order to evaluate the potential health-related effects (physical damage to the ear) from construction noise, the construction equipment noise levels were calculated using the FHWA's Roadway Noise Construction Model and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by the National Institute for Occupational Safety and Health (NIOSH). A division of the U.S. Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

It is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the linear Project Site and at various distances from sensitive receptors. Therefore, this analysis measures construction noise produced by all construction equipment operating simultaneously at a distance of 100 feet. The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 4.13-1.

Table 4.13-2. Construction Average (dBA) Noise Levels at Nearest Residential Receptors

Equipment	Estimated Exterior Construction Noise Level at Existing Residences (dBA)	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Site Preparation	83.8	*85*	**No**
Excavation	83.8	*85*	**No**
Utilities	81.3	*85*	**No**

Table 4.13-2. Construction Average (dBA) Noise Levels at Nearest Residential Receptors			
Equipment	**Estimated Exterior Construction Noise Level at Existing Residences (dBA)**	**Construction Noise Standards (dBA L_{eq})**	**Exceeds Standards?**
Paving	81.1	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting, Inc. using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to Appendix D for Model Data Outputs.
Notes: Construction equipment used during construction derived from the RCEM, which contains default construction equipment and usage parameters for typical roadway construction projects.
Leq = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

As shown in Table 4.13-2, Project onsite construction activities would not exceed the NIOSH threshold of 85 dBA L_{eq} at the nearest noise-sensitive receptors.

Offsite Construction Traffic Noise Impacts

Construction associated with the Project would result in additional traffic (e.g., worker commutes and material hauling) on adjacent roadways over the period that construction occurs. According to the RCEM, which is used to predict the number of on-road Project construction-related trips, construction would not instigate more than 30 trips in a single day (up to 20 construction worker commute trips and up to 10 haul truck trips). According to the Caltrans *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). While Project construction workers would instigate their trip to the Project Site from differing locations, the addition of 30 daily trips spread over the various roadway facilities that would be used to reach the Project Site would not result in a doubling of traffic on any of these roadway facilities, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and construction-related trips would cease upon completion of construction.

4.13.2.2 Operational Noise Impacts

The Project proposes necessary upgrades to the City of Isleton's wastewater treatment system. The Project would not expand its wastewater treatment system capacity in a manner that would induce population or employment growth. Rather, the Project proposes upgrades to the City of Isleton wastewater treatment system for the purpose of accommodating existing wastewater flows. Once upgrades are complete it would not be a greater source of operational noise beyond current conditions.

For the reasons listed above, this impact is less than significant.

Would the Project result in	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐

Less Than Significant Impact.

Construction Vibration Impacts

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Proposed Project would be primarily associated with short-term construction-related activities. Construction on the Project Site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is not anticipated that pile drivers would be necessary during Project construction. Vibration decreases rapidly with distance, and it is acknowledged that construction activities would occur throughout the Project Site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table 4.13-3.

Table 4.13-3. Typical Construction Equipment Vibration Levels

Equipment Type	Peak Particle Velocity at 50 Feet (inches per second)
Vibratory Roller	0.07
Hoe Ram (Rock Breaker)	0.03
Large Bulldozer	0.03
Caisson Drilling	0.03
Loaded Trucks	0.02
Jackhammer	0.01
Small Bulldozer/Tractor	0.00

Source: FTA 2018

The City of Isleton does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020) recommended standard of 0.2 inch per second peak particle velocity (PPV) with respect to the

prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

As shown in Table 4.13-3, groundborne vibrations attenuate rapidly from the source due to geometric spreading and material damping. Geometric spreading occurs because the energy is radiated from the source and spreads over an increasingly large distance while material damping is a property of the friction loss which occurs during the passage of a vibration wave. Vibration as a result of construction activities would not exceed 0.2 PPV. Thus, Project construction would not exceed the recommended threshold.

Operational Vibration Impacts

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Therefore, the Project would result in no groundborne vibration impacts during operations.

This impact is less than significant.

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?	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
		☐	☐	☐	☒

No Impact.

The Project Site is located approximately 4.8 miles southeast of the Rio Vista Municipal Airport and 4.9 miles southwest of the Spezia Airport. The City of Isleton and the Project Site are located outside of the noise contours of either of these airport facilities. Aircraft noise does not significantly impact the City of Isleton and the Proposed Project would not expose people visiting or working on the Project Site to excess airport noise levels. There would be no impact.

4.13.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.14 Population and Housing

4.14.1 Environmental Setting

According to the California DOF, which provides estimated population and housing unit demographics by year throughout the state, the City's population decreased 3.0 percent between 2010 and 2022, from 804 to 780. DOF estimates that there were 388 total housing units in the City, and a 19.8 percent vacancy rate as of January 1, 2022 (DOF 2022).

4.14.2 Population and Housing (XIV) Environmental Checklist and Discussion

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)?	☐	☐	☐	☒

No Impact.

The Project does not include the construction of any new homes**.** Development of the Project would not extend any roads or new public infrastructure. Therefore, direct or indirect increases in population growth would not occur as a result of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact.

No persons or residences would be displaced or removed as a result of the Proposed Project, and the Project would have no impact in this area.

4.14.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.15 Public Services

4.15.1 Environmental Setting

Public services include fire protection, police protection, parks and recreation, and schools. Generally, impacts in these areas are related to an increase in population from a residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on a response time.

4.15.1.1 Police Services

The Sacramento County Sheriff's Office provides law enforcement services in the City of Isleton. The closest Sheriff's Community Service Center is located at 14160 Grove Street Walnut Grove, CA, approximately 10 miles from the City of Isleton.

The Sacramento County Sheriff's Office provides local police protection services to the unincorporated area and provides specialized law enforcement services to both the incorporated and unincorporated areas. Specialized law enforcement includes providing court security services, operating a system of jails for pretrial and sentenced inmates, and operating a training complex. Local police protection includes response to calls and trouble spots, investigations, surveillance, and routine patrolling.

4.15.1.2 Fire Services

Fire protection services for the Project Area are provided by the Isleton Fire Department (IFD). The IFD is an all-risk organization providing basic life support services, fire suppression, vehicle extrication, and limited hazardous material response 24 hours a day, 365 days a year. IFD also performs fire inspections, fire code plan checks, and provide fire prevention awareness to the community.

The IFD consists of one full-time fire chief, one full-time lieutenant, one part-time engineer, one part-time firefighter and 20 dedicated volunteers and reserves that bring over 150 years of combined fire and Emergency Medical Service (EMS) experience to our small Delta community. The IFD maintains automatic and mutual aid agreements with surrounding departments such as River Delta Fire District, Montezuma Fire District, and the City of Rio Vista to help provide a better service to both residents and visitors of South Sacramento County. IFD currently maintains and operates a fleet of fire apparatus consisting of the following:

2 Staff Vehicles

2 Type 1 Engines

1 Type 2 Engine

1 Type 5 Engine

1 Water Tender, and

1 25 Foot Defender Series Safe Boat (Isleton 2022a).

The IFD fire station is located at 101 2nd Street.

4.15.1.3 Schools

The River Delta Unified School District (RDUSD) provides public educational services within the Isleton area. The RDUSD is located along the Sacramento River within three counties: Sacramento, Solano, and Yolo. Although RDUSD is a tri-county district, it is managed by and is part of the Sacramento County Office of Education in Sacramento. Within three counties, RDUSD serves the Sacramento communities of Clarksburg, Hood, Courtland, Locke, Walnut Grove, Ryde, Isleton, Rio Vista, Birds Landing, and Collinsville. RDUSD currently has an enrollment of 1,863 students (RDUSD 2022). Isleton Elementary School is the only school located in the City of Isleton.

4.15.1.4 Parks

The City owns and maintains six parks:

Wilson Park is located on Andrus Circle Drive/Jackson Slough Road. Baseball field, bleachers, food stand, restrooms, picnic area, and playground for children.

Main Street Park is located in the historical district in Isleton. The Chinese Memorial Pavilion is in the process of being restored. Benches and playgrounds for children available.

William Ramos Public Park & Recreation Area is located on 1st Street and Hwy 160. The area has public restrooms and a parking area. A stairway leads to the levee road (1st Street) to the Isleton Dock.

Monument Park is located off 2nd and D Streets. There are a BBQ and picnic bench for the public to enjoy.

Tower Park and Ride Lot located on 2nd and E Streets were completed in July 2019 for public use. An additional City bus stop is in the process of being constructed in the near future.

Tower Park adjacent to the Tower Park & Ride Lot landscaping and picnic area will be developed in the near future (Isleton 2022b).

4.15.1.5 Other Public Facilities

Other public facilities found in the Project vicinity include the Isleton City Hall located at 101 2nd Street and the Isleton Branch of the Sacramento County Library located at 412 Union Street.

4.15.2 Public Services (XV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire Protection?	☐	☐	☐	☒
Police Protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Parks?	☐	☐	☐	☒
Other Public Facilities?	☐	☐	☐	☒

No Impact.

The Proposed Project consists of the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. All improvements from the Project would be maintained by City and would not require public services beyond existing conditions. The Proposed Project would not result in an increase in population which, in turn, would impact public facilities. As such, the Proposed Project would not affect police protection, fire protection, schools, parks, or other public facilities. No impact would occur.

4.15.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.16 Recreation

4.16.1 Environmental Setting

As stated previously, the City owns and maintains six parks with in city. Many recreational opportunities are available within these facilities including playground equipment, barbecue facilities, benches and tables, and a baseball field. The City also owns and maintains boat dock at the William Ramos Public Park & Recreation Area.

4.16.2 Recreation (XVI) Materials Checklist

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 facility would occur or be accelerated?	☐	☐	☐	☒

No Impact.

As stated previously, the need for additional parkland is primarily based on an increase in population to an area. Given that the Proposed Project would not increase population, the Project would not burden any parks in the surrounding area beyond capacity by generating additional recreational users. Therefore, the Proposed Project would not increase the use of park and recreational facilities resulting in substantial

physical deterioration of the facility. There would be no impact to recreational facilities as a result of construction of the Proposed Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

No Impact.

The Proposed Project would not result in the construction of recreational facilities. The Project would not require the construction or expansion of additional offsite recreational facilities. As such, the Proposed Project would have no impact in this issue area.

4.16.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.17 Transportation

4.17.1 Environmental Setting

The Proposed Project includes sanitary sewer improvements, earthwork for raising pond berms, storm drain reconnections and equipment upgrades at the City's Wastewater Treatment Facility (WWTF, Figures 2a and 2b). The Proposed Project includes replacement of approximately 6,150 linear feet of wastewater gravity pipeline, abandonment of 660 linear feet of gravity sewer, 33 maintenance holes, and abandonment of 5,070 linear feet of wastewater gravity pipeline. Storm drain reconnections will include approximately 1,200 linear feet of new storm drain pipe, nine maintenance holes, and six drain inlet connections. The majority of the Proposed Project would be constructed in the various street ROWs as shown in Figures 2a and 2b. According to the City's 2000 General Plan, the city streets are classified as either arterial or collector streets (Isleton 2000). Most but not all, streets in the city have curbs gutters and sidewalks. The City does not have any formal bike lanes or routes, nor does the City have a formal bicycle plan.

The Proposed Project would replace aging facilities with a new wastewater pipelines and reconnection of storm drain facilities. The Proposed Project is not intended to increase service capacity in the wastewater system or storm drain system and, as such, would not directly or indirectly result in future growth and development not served by existing facilities.

4.17.2 Transportation (XVII) Environmental Checklist and Discussion

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, roadways, bicycle and pedestrian facilities?	☐	☐	☐	☒

No Impact.

The 2000 General Plan Section B Circulation of the Community Development Element provides guidance in the City for existing and future transportation facilities. The replacement of existing wastewater and storm drainage facilities and improvements to the WWTF would not conflict with any program, plan, ordinance, or policy addressing the circulation system in the 2000 General Plan. The Project would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☒	☐

Less Than Significant Impact.

CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a Vehicle Mile Traveled (VMT) methodology instead of the now superseded (as of January 1, 2019) LOS methodology. Pertinent to the Proposed Project are those criteria identified in Section 15064.3(b)(1) Land Use Projects. According to this section:

> "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor[4] should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact."

However, Section 15064.3(b)(3) allows an agency to determine a Project's transportation impact on a qualitative basis if a VMT methodology is unavailable, as is the case with the Proposed Project.

[4] "*High-quality transit corridor*" means an existing corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. For the purposes of this Appendix, an "existing stop along a high-quality transit corridor" may include a planned and funded stop that is included in an adopted regional transportation improvement program.

Section 15064.3(b)(3) is as follows:

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

The number of vehicle trips form the Proposed Project is based on the number of construction workers required to install the new facilities as discussed in Section 2.0. Completion of the Proposed Project is estimated to result in a daily maximum of 20 trips[5] over an approximately 100-day construction period.

The Governor's Office of Planning and Research (OPR) has provided a technical advisory for evaluation VMT impacts (OPR 2018). This document include screening thresholds to eliminate the need for VMT analysis for certain projects. As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing. According to this document, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant transportation impact (OPR 2018).

Because the Project would produce less than 110 trips per day, the Project would have a less than significant impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

No Impact.

The Project would neither result in the redesign of the existing roadway system nor introduce incompatible uses to the roadways The Proposed Project would have no impact in this area.

Would the Project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Result in inadequate emergency access?	☐	☐	☐	☒

[5]A maximum of 10 construction workers to and from the project site.

No Impact.

The Proposed Project would replace a below-ground wastewater system and storage pipeline and improvements to existing facilities as the WWTF. No long-term modifications to roadway features are proposed as part of the Project and therefore would not result in any long-term adverse impact on emergency access. Traffic disruption that may occur during Project construction, however, the area of impact is limited to small areas and alternative routes are available in adjacent roadways. Additionally, as a City project, the emergency services provided by the City will be well informed of the Project construction and appropriate measures for emergency access will be established prior to any emergency. Therefore, the Proposed Project would not result in inadequate emergency and have no impact in this area.

4.17.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.18 Tribal Cultural Resources

The following information was provided by ECORP Consulting, Inc. (2023) as a part of the Historic Properties Identification Report for the Proposed Project. The information provided below is an abridged version of this report and is provided here to afford a brief context of the Native Americans in the Project area.

4.18.1 Environmental Setting

Prior to the arrival of European Americans in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Archeologists recognized the uniqueness of California's Indigenous groups and classified them as belonging to the California culture area. This California culture area was further subdivided into four subculture areas: Northwestern, Northeastern, Southern, and Central.

When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about one third of the state's native population, lived in the Central Valley (ECORP 2023). At least seven distinct languages of Penutian stock were spoken among these populations: Wintu, Nomlaki, Konkow, River Patwin, Nisenan, Miwok, and Yokuts. Common linguistic roots and similar cultural and technological characteristics indicate that these groups shared a long history of interaction.

The Project Area is located on the margin of the Plains Miwok area, which included tribelets along the Sacramento, Cosumnes, and Mokelumne rivers. Tribelets were the primary political units and had defined boundaries which excluded resource use by members of other tribelets. Tribelets often consisted of a population of 300 to 500 people. Within each tribelet were permanent settlements, as well as seasonal hunting and gathering campsites. A total of 28 tribelets made up the Plains Miwok, and the tribelets would sometimes group together to form larger units, such as the Mokelumne, the Cosumnes, and the North Delta groups.

Subsistence for the Plains Miwok centered on hunting, gathering, and fishing within the confines of their tribelet areas. During the fall and early winter, acorns were gathered, stored and processed for

consumption year-round. Acorns were the main staple in the Plains Miwok diet, with at least seven different types available; acorns from valley oaks were the most commonly used. In addition to acorns, seeds and roots were also important food items, gathered primarily in the summer. Hunting of game animals occurred during the winter months with deer, tule elk, and antelope being the most common. These animals were hunted individually and also by families and tribelets. Smaller game, such as rabbit and various waterfowl, was also hunted, but were usually taken by trapping. The dominant aquatic resource for the Plains Miwok was salmon, which was caught primarily using nets, but also by harpoon during the spring and summer months. Sturgeon was also fished, using line and hook.

Among the Plains Miwok, the most common dwelling consisted of a thatched structure with poles arranged in a cone-shape with grasses, brush, and tules applied to the exterior. Wealthier people, or those of higher status, sometimes lived in earth-covered semisubterranean dwellings. At the center of the village were roundhouses or assembly houses. These large gathering structures were usually composed of a 40- to 50-foot-diameter pit dug down to about 3 to 4 feet below the surface. The structure had a planked roof with a layer of earth on top, which resembled a mound.

The role of tribelet chief was passed down from father to son. The chief was responsible for advising the tribe, managing the natural resources of the area, acting as a delegate between the other tribes, and serving as leaders during times of war. The chief had control of religious and social gatherings, as well as acting as the deciding body in times of arguments and disputes. Under the chief were messengers and speakers. The roles of messengers were to deliver invitations to ceremonies and to announce during ritual ceremonies. The titles of messengers were passed down to males within the families, in the same fashion as the chief. The roles of the speakers were to gather food contributions and ritual paraphernalia for ceremonies, and to make announcements for the chief regarding food preparation and gathering. The speaker's position was an elected one and there were speakers elected for each settlement within the tribelet.

The Plains Miwok came into contact with European culture beginning in the late 1700s as a result of increased incursions into the area by the Spanish. Traditional lifeways were drastically altered during the early to mid-1800s as Spanish colonization and proselytization, Mexican land grants, and the American takeover and settlement pushed indigenous peoples into the rugged California interior and reduced their numbers through transport to the missions, disease, and slaughter. Missionization of the Amuchamne people began in 1834 to 1835. However, only seven baptisms were recorded at that time. The population of the Amuchamne was depleted by the 1833 epidemic, which may in addition to resistance, account for the low number of subsequent baptisms.

4.18.2 Tribal Consultation

ECORP contacted the California NAHC on August 5, 2022 to request a search of the SLF for the Project Area. This search will determine if the California Native American tribes within the Project Area have recorded Sacred Lands, because the SLF is populated by members of the Native American community with knowledge about the locations of tribal resources.

The results of the SLF search were received by ECORP on October 12, 2022. Following the SWRCB prescribed process for CEQA-Plus projects, ECORP contacted all 19 persons or organizations on the NAHC list by letter on December 13, 2022 to request information on any unrecorded cultural resources that may exist within the current Project Area, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. ECORP received two response letters/emails: one from the Northern Valley Yokut/Ohlone/Patwin and one from the Yocha Dehe Wintun Nation. The Northern Valley Yokut/Ohlone/Patwin tribe responded and requested a tribal monitor be onsite during construction of the Project. The Yocha Dehe Wintun Nation concluded that the Project was not within the aboriginal territories of the Yocha Dehe Wintun Nation.

AB 52 requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the Proposed Project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The City has not received any native American consultation requests.

4.18.3 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

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

Less Than Significant With Mitigation Incorporated.

The Project Area has been identified as being within a Tribal Cultural Landscape (P-34-5225). This resource roughly encompasses the environment of the entire Lower Sacramento River within Sacramento County. This landscape was referred to as Hoyo Sayo/Tah Sayo (UAIC) by the Nisenan and the Plains Miwok as Waka-ce/Waka-Ly (Wilton Rancheria). The elements that define this landscape consist of the "waterways, tule habitat, fisheries and other wildlife." The local indigenous tribes traditionally used the materials of this area and continue to use them to create "traditional structures, clothing and watercraft". The Sacramento River and its surrounding environment is also featured in traditional stories, such as how fire was acquired and how Salmon gained its color.

Tremaine (2018) evaluated this resource as eligible for the NRHP under Criterion A and CRHR under Criterion 1. However, consultation with the USACE and SHPO on other projects along the river has failed to locate any federal agency concurrence on this resource or its eligibility. The land within the Project Area, while technically partially within the corridor of the recorded cultural landscape, has been heavily modified through agricultural and rural residential land use over a long period of time and does not appear to exhibit the characteristics of the landscape as described in the site record and may not be a contributor to that landscape. It is more likely that this landscape retains integrity much closer to the Sacramento River, and that the boundary, as mapped by the CHRIS, is somewhat arbitrary; however, Tribal consultation under applicable laws will determine this. A DPR 523 update form for P-34-5225 was not created as a result of the ECORP study.

While the Project Area has been heavily modified through agricultural and rural residential land use over a long period of time and does not appear to exhibit the characteristics of the landscape as described in the site record and may not be a contributor to that landscape, unanticipated, and accidental discovery of California Native American TCRs are possible during Project implementation, especially during excavation, and have the potential to impact unique cultural resources.

Additionally, in response to Native American tribal consultation requests about the Project, completed as a part of the CEQA process, the Northern Valley Yokut/Ohlone/Patwin requested in a January 5, 2023 correspondence that the Project be monitored by a Tribal monitor because the area is known to be sensitive for inadvertent discoveries of burial sites. As such, Mitigation Measures CUL-1 and CUL-2 have been included to reduce the potential for impacts to tribal cultural resources to a less than significant level.

4.18.4 Mitigation Measures

Implement Mitigation Measures CUL-1 and CUL-2.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

Water service in the Project Area is provided by California American Water. California American Water is a subsidiary of the American Water Company. California American Water serves 78 communities, and approximately 880,000 persons in California. (California American Water 2021).

The Isleton water system is served by wells that pump groundwater from the aquifers in the Isleton area. The water system consists of three wells, pumps, water treatment equipment, water storage, distribution piping, fire hydrants, valves and other equipment. California American Water uses drinking water treatment technologies to remove naturally occurring arsenic and manganese from the pumped groundwater. The water is chlorinated to ensure that it meets bacteriological quality standards and is distributed for residential and commercial use (Isleton 2020).

4.19.1.2 Wastewater

Sewage collection, treatment and disposal is provided by the City of Isleton.

The City's sewer collection system consists of approximately 21,100 linear feet of gravity sewer lines. The collection system conveys the wastewater to the City's lift station, which pumps the wastewater to the treatment plant located along Georgiana Slough southeast of the City near Ox Bow Marina, the facility provides only a primary level of treatment (Isleton 2020).

Wastewater is pumped to the WWTF via a force main, which runs near the Georgiana Slough levee. The force main enters the WWTF near the headworks, is metered and then discharged into the primary aeration pond. Operation and maintenance of the Oxbow Marina Recreational Facility collection system, lift station, and force main is the responsibility of the Oxbow Marina Recreational Facility. The City's WWTF consists of a 7-acre aeration stabilization lagoon system with effluent disposal to 24.2 acres of evaporation/percolation ponds. The primary aeration pond is equipped with four aerators. Wastewater is transferred from the aeration pond via gravity to the two stabilization ponds, which are operated in series. Effluent from the stabilization ponds is then discharged via gravity to six evaporation/percolation ponds. (Isleton 2020).

4.19.1.3 Storm Drainage

Storm water drainage in the city consists of a traditional above ground curb and gutter collection system and some underground facilities. Much of the City street system has curb and gutter and some drop inlets installed with ultimate disposal to major drainage ditches south of town. There are also roadside ditches in various areas of the City. Where curb, gutter and drop inlets are missing, drainage occurs by overland flow to the lowest points along the street system and adjacent parcels.

The islands of Brannan, Andrus and Lower Andrus are represented by individual Reclamation Districts (RD), each with its own elected Board of Trustees. The RDs surrounding the City of Isleton include RD2067, RD317 and RD407. These agencies operate the drainage pump facilities and oversee maintenance of the primary drainage canals around Isleton. Recognizing that the levees of these three districts were interconnected and impacted each other, the oversight and maintenance of the levees protecting the three areas were legislatively vested in a single entity known as Brannan-Andrus Levee Maintenance District (BALMD). RD407 within BALMD oversees dewatering for land areas encompassed by Sacramento River, the RD556 cross levee, Georgiana Slough, Terminus Road, and the historical meander line of Jackson Slough. (Isleton 2020).

4.19.1.4 Solid Waste

The California Department of Resources Recycling and Recovery (CalRecycle) provides waste collection and recycling information for the City of Isleton based on information reported by permitted facility operators and compiled by County/Regional Agency disposal reporting coordinators. As shown in Table 4.19-1, the majority of the City's solid waste was taken to the Forward Landfill or the Recology Hay Road Landfill in 2019. Post-2019 data are not available from CalRecycle at this time.

Table 4.19-1. Solid Waste Disposal Facilities Used by the City of Isleton

Destination Facility	Solid Waste Disposal (tons/year)			Landfill Information		
	2017	2018	2019	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Foothill Sanitary Landfill	1	2	5	125,000,000	6/10/2010	12/31/2082
Forward Landfill Inc.	72	388	466	22,100,000	12/3/2012	1/1/2020
Keller Canyon Landfill	4	1	5	63,408,410	11/16/2004	12/31/2050
L and D Landfill	1,040	26	38	4,100,000	5/31/2005	1/1/2023
North County Landfill and Recycling Center	37	52	94	35,400,000	12/31/2009	12/31/2048
Potrero Hills Landfill	53	-	-	13,872.000	1/1/2006	2/14/2048
Recology Hay Road	53	54	453	30,433,000	7/28/2010	1/1/2077

Table 4.19-1. Solid Waste Disposal Facilities Used by the City of Isleton

Destination Facility	Solid Waste Disposal (tons/year)			Landfill Information		
	2017	2018	2019	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Sacramento County Landfill	357	269	65	112,900,000	9/12/2005	1/1/2064
Yearly Total	1,566	794	1,127			
Average per Resident (lbs/day)	3.9	5.5	7.2			
Average per Employee (lbs/day)	42.7	64.2	82.1			

Source: CalRecycle 2022a, 2022b, and 2022c

4.19.1.5 Electricity

PG&E provides electrical services to the Project Area through state-regulated public utility contracts. PG&E's ability to provide its services concurrently for each project is evaluated during the development review process. The utility company is bound by contract to update its systems to meet any additional demand. No new PG&E electric facilities will be required to provide electricity to the Project. Nectarines

4.19.2 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

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, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Less Than Significant Impact.

4.19.2.1 Water

The replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF would not result in the need for additional water supplies or expanded water facilities. The Project would have no impact in this area.

4.19.2.2 Wastewater

The Proposed Project consists of the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the City's WWTF. The potential environmental impacts associated with the Proposed Project are discussed throughout this IS. No new or expanded wastewater treatment facilities are required to serve this replacement. The Project would have no impact in this area.

4.19.2.3 Storm Drainage

Replacement of existing wastewater pipelines and minor improvements to the City's WWTF would not result in the need for additional storm drainage facilities. Storm drain reconnections will include approximately,1,200 linear feet of new storm drain pipe, nine maintenance holes and two drain inlet connections. While the Project would add new storm drainage facilities in the City, impacts from these improvements are discussed throughout this IS. The Project would have a less than significant impact on storm drainage facilities in the City.

4.19.2.4 Electric Power

The Project would not result in the need for additional electricity supplies or expanded electrical facilities. The Project would have no impact in this area.

4.19.2.5 Natural Gas

The Project would not result in the need for additional natural gas supplies or expanded natural gas facilities. The Project would have no impact in this area.

4.19.2.6 Telecommunications

Telecommunication will be provided through existing company and personal cell phones. No new telecommunication facilities will be required to serve the Project.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒

No Impact.

The Project would not result in the need for additional water supplies or expanded water facilities. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

No Impact.

Implementation of the Project would not result in additional wastewater capacity as no additional demand would result for the pipeline replacement. The Project would have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact.

No recycling or waste disposal would be required for operation and maintenance of the Proposed Project and therefore would not affect landfill capacity because the amount of construction debris requiring disposal would be minor and would only occur during the construction period (e.g., cardboard, wood scraps, plastic straps). A less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local statutes and management and reduction regulations related to solid waste?	☐	☐	☒	☐

Less Than Significant Impact.

The Proposed Project is required to comply with all state and federal statutes regarding solid waste. This impact is considered less than significant.

4.19.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.20 Wildfire

4.20.1 Environmental Setting

The risk of wildfire is related to a variety of parameters, including fuel loading (e.g., vegetation), fire weather (e.g., winds, temperatures, humidity levels and fuel moisture contents), and topography (e.g., degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area-to-mass ratio and require less heat to reach the ignition point, while fuels such as trees have a lower surface area-to-mass ratio and require more heat to reach the ignition point.

The City lies in an area of low wildfire risk, according to CAL FIRE (CAL FIRE 2007). The Project is the replacement of sewer lines, reconnection of storm drain lines, and minor improvements to the WWTF. Implementation of the Proposed Project would have no impact with regards to wildland fires.

4.20.2 Wildfire (XX) Environmental Checklist and Discussion

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?	☐	☐	☐	☒

No Impact.

The Proposed Project is not located in or near a state responsibility area or in a very high fire hazard severity zone. The Project would have no impact in this area.

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
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?	☐	☐	☐	☒

No Impact.

The Proposed Project is not located in or near a state responsibility area or in a very high fire hazard severity zone. The Project would have no impact in this area.

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
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?	☐	☐	☐	☒

No Impact.

The Proposed Project is not located in or near a state responsibility area or in a very high fire hazard severity zone. The Project would have no impact in this area.

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
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?	☐	☐	☐	☒

No Impact.

The Proposed Project is not located in or near a state responsibility area or in a very high fire hazard severity zone. The Project would have no impact in this area.

4.20.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☒	☐	☐

Less than Significant With Mitigation Incorporated.

As discussed in Sections 4.4 and 4.5, the Proposed Project would have potential impacts to these resources. However, with implementation of mitigation measures proposed in the relevant sections of this IS, these potential impacts would be reduced to a level that is considered less than significant.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) 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)?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

Implementation of the Proposed Project would result in the repair and replacement of existing wastewater and storm water facilities. The Project would neither increase the WWTF capacity nor allow for unintended growth of Isleton. However, in conjunction with other approved or pending projects in the region, the Project has the potential to result in cumulatively considerable impacts to the physical environment including biological and cultural resources. However, with implementation of mitigation measures proposed in the relevant subsections of this IS, these potential impacts would be reduced to a level that is considered less than significant.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Less Than Significant.

The Proposed Project is the replacement of existing wastewater and storm drainage pipelines and minor improvements to the WWF. The Proposed Project would not result in direct and indirect impacts to human beings.

5.0 COMPLIANCE WITH FEDERAL REGULATIONS

The City is seeking funding for the Proposed Project under the CWSRF Program, which is partially funded through the USEPA. Because of the federal nexus with the USEPA, projects seeking funding through the CWSRF Program are subject to federal laws and regulations (e.g., federal *cross-cutters*). Under the CWSRF Program, SWRCB uses a Project's CEQA document along with federal cross-cutting documentation in place of a NEPA document; this document is termed a *CEQA-Plus* document. This section addresses the Project's compliance with federal laws and regulations to satisfy the CEQA-Plus requirements.

5.1 Clean Air Act

General Conformity ensures that the actions taken by federal agencies do not interfere with a state's plans to attain and maintain national standards for air quality.

Established under the CAA (Section 176(c)(4)), the General Conformity rule plays an important role in helping states improve air quality in those areas that do not meet the NAAQS. Under the General Conformity rule, federal agencies must work with state and local governments in a nonattainment or maintenance area to ensure that federal actions conform to the air quality plans established in the applicable state or Tribal implementation plan. The overall purpose of the General Conformity rule is to ensure that:

federal activities do not cause or contribute to new violations of NAAQS;

actions do not worsen existing violations of the NAAQS; and

attainment of the NAAQS is not delayed.

Federal Attainment Status and predicted annual construction and operational generated emissions for the Proposed Project are summarized in Table 5.1-1. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the Conformity Determination thresholds. There would be no operational-related emissions from the Project.

Table 5.1-1. Federal Attainment Status – Project Emissions

Pollutant	Federal Status (Attainment, Nonattainment, Maintenance, or Unclassified)	Nonattainment Rates (i.e., marginal, moderate, serious, severe, or extreme)	Threshold of Significance for Project Air Basin (if applicable – contact Local Air District)	Estimated Construction Emissions (Tons/Year)	Estimated Operation Emissions (Tons/Year)
Ozone (O_3)	Nonattainment	serious	none	n/a	None
Carbon Monoxide (CO)	Unclassified/attainment	maintenance	none	1.5	None
Oxides of Nitrogen (NO_x)	Nonattainment	serious	85 lbs/day (construction only)	1.5	None
Reactive Organic Gases (ROG)	See ozone	See ozone	65 lbs/day (operation only)	0.1	None
Volatile Organic Compounds (VOC)	See ozone	See ozone	none	0.1	None
Lead (Pb)	Unclassified/attainment	-	none	0.0	None
$PM_{2.5}$	Nonattainment	-	14.6 tons/yr	0.1	None
PM_{10}	Attainment	-	15 tons/yr	0.2	None
Sulfur Dioxide (SO_2)	Unclassified/attainment	-	none	0.0	None

Source: USEPA 2020; CARB 2019; RCEM Version 9.0.0. Refer to Appendix A for Model Data Outputs.
Notes: Emission calculations account for the import of 2,000 cubic yards of soil and asphalt material and export of 2,000 cubic yards of soil and asphalt material during Project implementation.

As shown in Table 5.1-2, projected emissions resulting from the Project fall below the USEPA Conformity Determination thresholds of 50 and 100 tons per year for all pollutants. The Project would not generate emissions during operations.

Table 5.1-2. Project Emissions - USEPA Conformity Determination Analysis

Construction	Pollutant (tons per year)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Project Construction[1]	0.1	1.5	1.5	0.0	0.2	0.1
USEPA Conformity Determination Thresholds (40 CFR 93.153)[2]	50	50	100	100	100	100
Exceed USEPA Conformity Threshold?	No	No	No	No	No	No

Source: RCEM version 9.0.0. Refer to Appendix A for Model Data Outputs.
Notes: Emission calculations account for the import of 2,000 cubic yards of soil and asphalt material and export of 2,000 cubic yards of soil and asphalt material during Project implementation.

5.2 Coastal Barriers Resources Act

The Coastal Barrier Resources Act of 1982 designated various undeveloped coastal barriers for inclusion in the Coastal Barrier Resources System (System). Areas so designated were made ineligible for direct or indirect federal financial assistance that might support development, including flood insurance, except for emergency life-saving activities. Exceptions for certain activities, such as fish and wildlife research, are provided, and National Wildlife Refuges and other, otherwise protected areas are excluded from the System. The System includes relatively undeveloped coastal barriers along the Atlantic and Gulf coasts, as well as the Great Lakes, Puerto Rico, and the Virgin Islands. The Proposed Project is not within the System, as it is in the State of California and the System encompasses areas within the Gulf Coast, Atlantic Ocean, and the Great Lakes but not the Pacific Coast. Therefore, the Coastal Barriers Resources Act does not apply to the Project.

5.3 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) was passed by Congress to encourage coastal states to develop and implement a Coastal Zone Management Plan, or Program (CZMP). The intents of CZMPs are to protect natural resources, manage development in high hazard areas, give development priority to coastal dependent uses, provide public access for recreation, and coordinate state and federal actions. In 1978, the federal government certified the California Coastal Management Plan, the enforceable policies of which are found in Chapter 3 of the California Coastal Act of 1976, as amended. The Project would be located in the City of Isleton, over 60 miles east of the Pacific coast. None of the Project's components would be located within the coastal zone, and the CZMA does not apply to the Project.

5.4 Endangered Species Act

The federal ESA (16 USC 1531 et seq.) and subsequent amendments establish legal requirements for the conservation of endangered and threatened species and the ecosystems upon which they depend. The ESA is administered by the USFWS for terrestrial species, and by the National Marine Fisheries Service (NMFS) for marine species and anadromous fish. Under the ESA, the USFWS or NMFS may designate critical habitat for listed species. Section 7 of the ESA requires federal agencies to consult with USFWS or NMFS to ensure that their actions are not likely to jeopardize listed threatened or endangered species, or cause destruction or adverse modification of critical habitat. Section 10 of the ESA requires similar consultation for non-federal applicants. As described in Section 4.4, one federally listed species is identified from the Project region: giant garter snake; however, Mitigation Measure BIO-3, discussed in Section 4.4, would reduce the potential impacts to a less than significant level. Therefore, the Project would not have the potential to violate the ESA.

5.5 Environmental Justice

In 1994, President Bill Clinton issued the EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," to focus federal attention on environmental and human health conditions in minority and low-income communities. EO 12898 promotes nondiscrimination in federal programs that substantially affect human health and the environment, and it provides information access and public participation relating to these matters. This order requires federal agencies (and state agencies receiving federal funds) to identify and address any disproportionately high or adverse human health or environmental effects of their programs, policies, and activities on minority and/or low-income populations. The Council on Environmental Quality (CEQ) oversees federal compliance with EO 12898. According to the CEQ environmental justice guidelines, minority populations should be identified if:

- A minority population percentage either exceeds 50 percent of the population of the affected area, or
- If the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (e.g., a governing body's jurisdiction, neighborhood census tract, or other similar unit).

The City's 2022 Housing Element provides race/ethnicity and income information in the city based on the U.S. Census 2018 American Community Survey. Table 5.5-1 shows Year 2018 minority and low-income population percentages for the affected local and regional areas.

Table 5.5-1. Year 2018 Minority Population Percentages for the Affected Local and Regional Areas

Jurisdiction	Minority Population Percentage
City of Isleton	42.5
Sacramento County	23.2

Source: City of Isleton 2022c

As shown, while the City's minority population is less than 50 percent, the City contains minority population percentages higher than the greater regions in which it is located. Potential adverse impacts of the Project are limited to short-term, construction-related nuisance effects. Once completed, the Project would be beneficial to the surrounding residents by replacing sewer and storm drainage pipelines that are near the limit of the design lifetime. Therefore, the Project does not involve any activity that is likely to be of interest to or could have a disproportionate impact upon minority or low-income populations. There are no known TCRs that are listed in, or are known to be eligible for listing in, the CRHR or local register of historical resources within the Proposed Project or the 0.5-mile surrounding area. Therefore, the Project does not involve any activity that is likely to be of interest to or could have a disproportionate impact upon Indigenous populations or tribes. In addition, Mitigation Measure CUL-2 requires an onsite tribal monitor during vegetation cleaner and ground distribution activities to protect any unknown tribal cultural resources.

5.6 Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the contribution of federal programs to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It does not authorize the federal government to regulate the use of private land or lands not under federal jurisdiction, or in any way affect the rights of property owners. Under the FPPA, farmland includes Prime Farmland, Unique Farmland, and Land of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland; however, it cannot be open water or urban built-up land.

The DOC identifies the Project Site as Urban and Built-Up Land or Other Land. As such, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

5.7 Floodplain Management

EO 13690, "The Federal Flood Risk Management Standard" (January 30, 2015) revises EO 11988, "Floodplain Management" (May 24, 1977), and directs federal agencies to take the appropriate actions to reduce risk to federal investments, specifically to "update their flood-risk reduction standards." The goal of this directive is to improve the resilience of communities and federal assets against the impacts of flooding and recognizes the risks and losses due to climate change and other threats The FEMA Flood Insurance Rate Maps are used to determine if properties are located within Special Flood Hazard Areas. As explained in Section 4.10, the Project is located within a 100-year flood hazard area (FEMA 2012). All Project improvements would be underground with the exception of the improvements to the WWTF.

However, these improvements are insubstantial and would not redirect or impede flood waters. The Project would not include the construction of any habitable structures but merely the replacement of existing wastewater and storm drainage infrastructure. Therefore, no impacts related to flood hazards or flood water flows would occur.

5.8 National Historic Preservation Act

The NHPA of 1966, as amended, sets forth the responsibilities that federal agencies must meet in regard to cultural resources, especially in regard to Section 106 as set forth in the regulations (36 CFR Part 800). Federal agencies must conduct the necessary studies and consultations to identify cultural resources that may be affected by an undertaking, evaluate cultural resources that may be affected to determine if they are eligible for the NRHP (i.e., whether identified resources constitute historic properties), and assess whether such historic properties would be adversely affected. Historic properties are resources listed on or eligible for listing on the NRHP (36 CFR 800.16[l][1]). A property may be listed in the NRHP if it meets criteria provided in the NRHP regulations (36 CFR 60.4). Typically, such properties must also be 50 years or older (36 CFR 60.4[d]).

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, or association and:

(A) That are associated with events that have made a significant contribution to the broad patterns of our history; or

(B) That are associated with the lives of persons significant in our past; or

(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 artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(D) That have yielded, or may be likely to yield, information important in prehistory or history.

Section 106 defines an adverse effect as an effect that alters, directly or indirectly, the qualities that make a resource eligible for listing in the NRHP (36 CFR 800.5[a][1]). Consideration must be given to the property's location, design, setting, materials, workmanship, feeling, and association, to the extent that these qualities contribute to the integrity and significance of the resource. Adverse effects may be direct and reasonably foreseeable or may be more remote in time or distance (36 CFR 8010.5[a][1]).

As discussed in Section 4.5, the Historic Properties Identification Report for the Isleton Wastewater Treatment System Improvement Project completed by ECORP (2023), analyzed the APE based on the provisions for the treatment of cultural resources contained within Section 106 of the NHPA. A record search was conducted in order to determine the potential for the Project to adversely affect cultural resources eligible for listing on the NRHP. As part of this process, The horizontal APE consists of all areas where activities associated with a project are proposed and, in the case of this Project, equals the Project Area subject to environmental review under CEQA. This includes areas proposed for sewer line and

maintenance hole installation and equipment upgrades, as well as potential equipment paths of travel and staging. The horizontal APE consists of all areas where activities associated with the Project are proposed and, in the case of the current Project, equals the Project Area subject to environmental review under NEPA.

The vertical APE is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical APE for this Project includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project and is dependent upon the locations where maximum depth trenching will occur, which may be up to 12 feet below the surface as described in the Project description. Therefore, a review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

The vertical APE also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. Equipment upgrades at the WWTF will be within existing facility structures and will not exceed the height of surrounding structures. No other above ground structures will be constructed outside of the WWTF and Treatment Pond #1. Once completed, the Project's vertical APE will be ground surface level at the location of sewer installation.

A records search for the APE was completed at the NCIC of the CHRIS at California State University, Sacramento on September 9, 2022 (NCIC search #SAC-22-178). The purpose of the records search was to determine the extent of previous surveys within a 1-mile (800-meter) radius of the proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area.

Forty-nine previous cultural resource investigations have been conducted in or within 1 mile of the property, covering approximately 80 percent of the total area surrounding the property within the records search radius. Five of the 49 studies were conducted within the Project Area and the other 44 were within the 1-mile radius. These studies revealed the presence of a pre-contact habitation site and historical sites, including a cannery, commercial structures, and historic water system. The previous studies within 1 mile of the Project Area were conducted between 1974 and 2021.

The results of the records search indicate that 80 percent of the Project Area has been previously surveyed for cultural resources; however, these studies were conducted in smaller segments, at different times, by different consultants, as many as 39 years ago under obsolete standards. Therefore, ECORP conducted a pedestrian survey of the accessible and exposed ground portions of the Project Area for the Project under current protocols.

ECORP archeologists, as a part of the Historic Properties Identification Report, surveyed the Project Area for cultural resources on September 29, 2022. Most of the Project Area consisted of paved road surfaces. Gravel roads constructed on berms, which are covered in short grasses, surrounded the wastewater treatment plant leach fields. Portions of the Proposed Project Area expanded onto private land and these areas with restricted access were not surveyed in their entirety. Surface visibility over much of the Project Area was poor (0 to 10 percent), due to the paved surfaces. Most of the ground surface in Wilson Park is

covered in regularly maintained grass for a ball field. In addition, ECORP inspected areas with open ground visibility, especially along the edge of paved roads. Back dirt from rodent burrows was also inspected. ECORP did not identify areas of pre-contact cultural materials or evidence of habitation from the exposed soil. The previously recorded resources were revisited.

As a result of previous investigations by other firms a total of three cultural resources were recorded within the Project Area: the Isleton Chinese and Japanese Commercial Districts; the Southern Pacific Railroad Grade; and a Tribal Cultural Landscape. Of these, only the Chinese and Japanese Commercial Districts is listed on the National Register. The field survey conducted by ECORP identified a group of historic-period roads constructed in the City of Isleton and recorded them as a single-plat: IW-01. ECORP also noted the presence of Wilson Park, Isleton Wastewater leach fields and corporate yard, a distribution line, as well as Isleton Mobile Home Park and Apartments. These latter resources were noted but not recorded due to no potential for the Project to impact those resources, either directly or indirectly.

The National Register listed Isleton Chinese and Japanese Commercial Districts consist of brick-and-frame commercial buildings constructed after a 1926 fire destroyed the town. The district encompasses three square blocks between E and H streets and is bisected by Main Street east to west. The Japanese district is located east of F Street and the Chinese district is located west. Both districts, though distinct in description, are recorded and listed on the NRHP as one resource (NRHP# HRI-5641-006-9999). ECORP archologists determined that the Project would result in no adverse effect to the Historic Property (for Section 106) or significant impact to the Historical Resource.

All other known historical resources in the Project Area would not be affected by the Project or are not considered Historical Resources as defined by Historic Properties under Section 106 of the NHPA. Further information is provided in Section 4.5 of the IS/MND and the Historic Properties Identification Report for the Isleton Wastewater Treatment System Improvement Project (ECORP Consulting 2023).

5.9 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) (Public Law 104-267) passed in 1976 and was amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297) and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act in 2007. The MSA, as amended, governs marine fisheries management in U.S. federal waters out to 200 nautical miles from shore and encourages "long-term biological and economic sustainability of our nation's marine fisheries." The goals of the MSA are to prevent overfishing, to rebuild overfished stocks, to increase long-term economic and social benefits, and to ensure a safe and sustainable supply of seafood. The act is in place to protect our natural resources, to maximize the possible use of these resources, and to make sure the use of marine resources is done in a safe manner. Amendments to the 1996 MSA require the identification of Essential Fish Habitat (EFH) for federally managed species and the implementation of measures to conserve and enhance this habitat. Any project requiring federal authorization is required to complete and submit an EFH Assessment with the application and either show that no significant impacts to the essential habitat of managed species are expected or identify mitigations to reduce those impacts. Under the MSA, Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 USC Section 1802(10)). The EFH provisions of the MSA offer resource managers a

means to heighten consideration of fish habitat in resource management. Pursuant to Section 305(b)(2), federal agencies shall consult with the NMFS regarding any action they authorize, fund, or undertake that might adversely affect EFH. The Proposed Project is adjacent to the Sacramento River, which flows into the San Francisco Bay approximately 40 miles downstream from Isleton. While the Project is adjacent to the Sacramento River, all Project improvements would be on the land side of the Sacramento River levees and would not penetrate any levees or come in contact with the river. The Project would not affect any fisheries or EFH.

5.10 Migratory Bird Treaty Act

The MBTA of 1918 (16 USC 703-711) prohibits take of any migratory bird, including eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). Under the MBTA, "migratory bird" is broadly defined as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species. As described in Section 4.4, birds protected under the MBTA could nest within roadside trees and within landscape vegetation adjacent to the site. Mitigation Measure BIO-4 requires that ground-disturbing and vegetation-disturbing work be completed during the non-nesting season to avoid pre-construction survey by a qualified biologist in all areas to be disturbed by project construction no more than 14 days in advance of activities. Active bird nests identified during the survey effort shall be avoided until such time that the qualified biologist has determined that the nest(s) is vacant. Depending on the location of the active nest(s) the qualified biologist may establish a no-work buffer around the active nest. Implementation of Mitigation Measure BIO-4 would ensure the Project does not violate the MBTA.

5.11 Protection of Wetlands

The purpose of EO 11990 (May 24, 1977) is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, EO 11990 requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. EO 11990 applies to: Acquisition, management, and disposition of federal lands and facilities construction and improvement projects which are undertaken, financed, or assisted by federal agencies; and federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. As described in Section 4.4, a preliminary aquatic resource assessment has been conducted for the Study Area as part of the reconnaissance-level survey. No wetlands were observed during this assessment. The only aquatic resources present within the Study Area include the constructed wastewater treatment ponds within the existing City WWTF. The wastewater treatment ponds are located within the City WWTF, west of the Georgiana Slough. The wastewater treatment ponds are constructed/excavated ponds located between access roads. Upland and emergent wetland vegetation grows along the edges of the filled ponds. Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA, are typically not Waters of the U.S. or Waters of the State.

5.12 Safe Drinking Water Act, Sole Source Aquifer Protection

The Safe Drinking Water Act of 1974 (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The SDWA authorizes USEPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards. Under the SDWA, the USEPA also establishes minimum standards for state programs to protect underground sources of drinking water from endangerment by underground injection of fluids. The Proposed Project is located in the City of Isleton within Sacramento County, California. Designated sole source aquifers in California are located in Fresno County, Scotts Valley, and on the California/Mexico border, none of which would be in the vicinity of the Proposed Project (USEPA 2022). Therefore, the SDWA does not apply to the Project.

5.13 Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (16 USC Section 1271 et seq.) establishes a National Wild and Scenic Rivers System (NWSRS) for the protection of rivers with important scenic, recreational, fish and wildlife, and other values. Rivers are classified as wild, scenic, or recreational. The Act designates specific rivers for inclusion in the System and prescribes the methods and standards by which additional rivers may be added. There are no wild and scenic rivers within the vicinity of the Proposed Project. The nearest designated wild and scenic river in the National Wild and Scenic Rivers System is the American River from the Nimbus Dam to the confluence with the Sacramento River, located more than 30 miles east of the City (NWSRS n.d.). Therefore, no portion of the Project is located within or near a designated wild and scenic river.

6.0 ALTERNATIVES

While an alternatives analyses is not generally required for IS/MNDs, the SWRCB's CWSRF Program requires an environmental alternative analysis for projects that have a Negative Declaration or MND. As such, this alternatives analysis is based on the requirements for EIRs established in CEQA Guidelines Section 15126.

The alternatives analysis consists of the following components: an overview of CEQA requirements for alternatives analysis, descriptions of the alternatives evaluated, a comparison between the anticipated environmental effects of the alternatives and those of the Proposed Project, and identification of an environmentally superior alternative.

6.1 Introduction

6.1.1 CEQA Requirements For Alternatives

CEQA Guidelines Section 15126 requires that a reasonable range of alternatives to a proposed project that can attain most of the basic project objectives but has the potential to reduce or eliminate significant adverse impacts of the proposed project and may be feasibly accomplished in a successful manner, considering the economic, environmental, social, and technological factors involved. An alternatives analysis must evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6(a), (d) and (e)). If certain alternatives are found to be infeasible, the analysis must explain the reasons and facts supporting that conclusion.

Section 15126.6(d) also requires that if an alternative would cause one or more significant effects in addition to those caused by a proposed project, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. One of the alternatives analyzed must be the *No Project* alternative (CEQA Guidelines Section 15126.6(e)). The analysis must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency's determination (CEQA Guidelines Section 15126.6(c)).

CEQA Guidelines Section 15126.6(e)(2) requires that the alternatives analysis identify the environmentally superior alternative. If that alternative is the No Project Alternative, the analysis shall also identify an environmentally superior alternative among the other alternatives. The environmentally superior alternative is discussed in Section 6.3.

6.1.2 Development of Project Alternatives

This section discusses the reasoning for selecting and rejecting alternatives. This section also summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an EIR is governed by the *Rule of Reason*. The primary objective is formulating potential alternatives and choosing which ones to analyze to ensure that the selection and discussion of alternatives fosters informed decision-making and informed public participation. This is accomplished by providing sufficient information to enable readers to reach conclusions themselves about such alternatives. This approach

avoids assessing an unmanageable number of alternatives or analyzing alternatives that differ too little to provide additional meaningful insights about their environmental effects. The alternatives addressed in an EIR are selected in consideration of one or more of the following factors:

The extent to which the alternative would avoid or reduce any of the identified significant effects of the project and yet would accomplish most of the basic objectives of the project.

The feasibility of the alternative, taking into account site suitability and surrounding existing land uses, and consistency with applicable public plans, policies, and regulations.

The appropriateness of the alternative in contributing to a reasonable range of alternatives necessary to permit a reasoned choice.

The alternatives analyzed in this IS/MND were ultimately chosen based on each alternative's ability to feasibly attain the basic Project objectives while avoiding or reducing one or more of the Project's significant effects. The analysis provides readers with adequate information to compare the effectiveness of identified mitigation or significant adverse impacts and to enable readers to make decisions about the project. CEQA requires EIRs to address a reasonable range of reasonable alternatives, but not all potential alternatives.

6.1.3 Project Objectives

As noted above, the IS/MND includes a reasonable range of alternatives to the Project that would feasibly attain the basic Project objectives while avoiding or reducing one or more of the Project's significant effects (CEQA Guidelines Section 15126.6(a)). In identifying the range of alternatives for analysis, the Project objectives are identified below:

1) Replacement of existing wastewater and stormwater pipelines and WWTF improvements needed to continue to provide adequate wastewater treatment and storm water infrastructure in the City.

2) Improve the existing ability of the City to convey wastewater and stormwater in an area with failing infrastructure.

3) Improve the wastewater and stormwater conveyance within the City in a cost effective manner with minimal disruption of service.

6.2 Alternatives Descriptions and Analysis

6.2.1 Alternatives Considered but Rejected as Infeasible

6.2.1.1 Regionalization

As a small disadvantage community within the Delta, the City of Isleton is a great candidate for regional WWTF. Regionalization would benefit not only the City but also neighboring parcels outside City limits. The City is currently under a Cease-and-Desist Order (CDO) due to lack of capacity at the treatment facility, including their disposal ponds. Relying on disposal ponds within the Delta is a challenge, as the

land is below sea level and saturated by groundwater with tidal effects. The disposal ponds require much more maintenance to stay operational, resulting in higher operational and maintenance costs.

Neighboring parcels along West Tyler Island Road are on septic connections which are likely degrading the groundwater supply. The degradation can be seen in the high coliform levels in the City monitoring wells upstream of the WWTF. The City cannot handle adding those connections to the existing treatment facilities due to current capacity issues, but they could be included in a regionalization effort.

Regionalization will likely improve treatment of effluent, lower operation and maintenance costs for the City, allow for septic to sewer connections for nearby parcels, and reduce the impact of septic systems on groundwater. In addition, larger wastewater treatment plants can provide better treatment at a lower cost to the customers than the smaller treatment plants.

The City is pursuing regionalization as a long-term alternative regionalization. However, due to time constraints and cost, regionalization is not feasible at this time.

6.2.2 Description of Alternatives

6.2.2.1 Alternative 1: No Project

CEQA Guidelines Section 15126.6(e)(1) states that a No Project Alternative must be analyzed. Alternative 1 evaluates the environmental impacts if the Project site were to remain in its current state as an existing deteriorating wastewater pipeline. No construction would occur with this alternative and the pipeline(s) will most likely fail at some point.

6.2.2.2 Alternative 2: System Upgrades

Alternative 2 would include identifying and repairing segments of the wastewater system that are known to contribute to inflow and infiltration (I&I) and upgrading equipment at the WWTF to regain existing capacity and improve operations.

A WWTF evaluation was completed for the Project. The WWTF evaluation determined that there were many sanitary sewer pipes, sanitary sewer manholes and area drains that are contributing I&I into the system. The evaluation estimated that over 12 million gallons of I&I flowed into the sewer system on an average year. The focus of this Alternative is repairing the system to reduce the effect of I&I on treatment and capacity. The Alternative would replace or rehabilitate approximately 5,500 linear feet of pipe, including cleanouts and manholes. In addition, approximately 1,200 linear feet of storm drainpipe, including manholes and drains, would be installed to remove illicit storm drain connections from the sanitary sewer system and connect them to the storm drain system.

Existing aeration equipment at the WWTF is nearing the end of its useful life and in need of replacement. Alternative 2 would install new aeration equipment to improve efficiency and decrease the accumulation of sludge and maintain capacity. Additionally electronic sensors and meters would be updated, a backup generator will be installed, and valving for the distribution to disposal ponds will be added.

The system and aeration repair aspects of this alternative would not provide additional capacity to the WWTF but would free up existing capacity by reducing the amount of stormwater entering the system and reducing the accumulation of sludge in the ponds. These repairs would reduce the cost of operations and maintenance by reducing extraneous flows from storm drain water and reducing the potential for manual removal and disposal of sludge from the ponds, which is increasingly expensive due to tightening restrictions on landfills and other approved disposal sites.

For this alternative to fulfill the CDO, the permitted average dry weather flow must be reduced to provide a water balance demonstrating capacity for a 100-year annual precipitation event (100-year water year) with 2 feet of freeboard. This reduction would better match the existing condition and account for reduction of Inflow from the storm drain, as well as take into consideration future development.

6.2.2.3 Alternative 3: Disposal Ponds Improvements

Alternative 3 would only make improvements to the WWTF disposal ponds. No sewer pipelines or storm drain improvements would be completed as a part of this alternative. There are two methods considered for improving the disposal ponds: raising the existing pond berms to increase their capacity or constructing an additional disposal pond. Additional disposal ponds could be constructed, but the City would need to acquire a neighboring parcel, as the City does not own any undeveloped land near the WWTF. Neighboring parcels are used for agricultural purposes, which is a large portion of the City's economy. Eminent domain can be a lengthy and costly process, so raising the existing pond berms would be the preferred improvement for Alternative 3.

According to the geotechnical report, the existing WWTF are underlain by highly compressible materials. Table 6.0-1 below summarizes how much settlement would be anticipated after 10 years and 50 years based on how much fill was added.

Table 6.0-1. Pond Berm Settlement

Location	Fill Height (feet)	Settlement	
		After 10 Years (inches)	After 50 Years (inches)
Disposal Ponds	1	5	6 inches
	2	10	14
	3	15	21
	5	22	28
Treatment Ponds	1	0.7	0.8
	2	1.2	1.3
	3	2	2
	5	7	7

If two feet of fill is added to the pond berms to provide adequate capacity and freeboard, the fill would settle approximately one inch per year. The pond berms would require ongoing site work to maintain the appropriate berm height and offset the settlement effects.

6.2.3 Analysis of Alternatives

The Project alternatives are evaluated in less detail than those of the Proposed Project, and the impacts are described in terms of difference in outcome compared with implementing the Proposed Project. Table 6.0-1 at the end of this section provides an at-a-glance comparison of the environmental benefits and impacts of each alternative. Table 6.0-2 compares the alternatives to the basic Project objectives.

6.2.3.1 Alternative 1: No Project

Under the No Project Alternative, future development of the Proposed Project would not occur, and the wastewater and storm drainage infrastructure of the Project site would remain as it currently exists. No equipment improvements would occur at the WWTF.

Aesthetics and Scenic Resources

The Proposed Project would not result in any significant impacts to aesthetics and scenic resources.

Alternative 1 would not result in the replacement of any new wastewater or storm drainage facilities on the site. The site would remain in its current condition and therefore Alternative 1 would not impact views of scenic resources nor substantially degrade the existing visual character or quality of the site. Also, Alternative 1 would not introduce new sources of light and glare which would affect daytime or nighttime views in the area.

Impacts to aesthetics from the Proposed Project were determined as a part of the IS/MND analysis to be less than significant with no mitigation measures necessary. However, Alternative 1 would not alter the existing aesthetics and scenic resources in any way. Therefore, Alternative 1 is considered superior to the Proposed Project with regard to impacts to aesthetics and scenic resources.

Agriculture and Forestry Resources

As discussed in Section 4.2, none of the Proposed Project is located on land identified as farmland and therefore the Project would not result in impacts to agricultural resources.

No construction would occur in Alternative 1 and any issues related to agricultural resources would remain as they currently exist and would not expand. However, the Proposed Project would have no impact to agricultural resources as none existing within the Project site, As such, Alternative 1 is considered the same as the Proposed Project with regard to impacts to agricultural resources.

Air Quality

As discussed in Section 4.3, the Project would generate air emissions during construction but would not exceed applicable air quality thresholds, not result in TAC impacts, and not conflict with regional air quality management planning.

Alternative 1 would not exceed any air quality thresholds as the site would remain in its existing condition and therefore no impact to air quality would occur. As such, the impacts to air quality under this alternative are less than the Proposed Project.

Biological Resources

As discussed in Section 4.4, the Proposed Project would result in potential impacts to special status species. However, as defined in the IS/MND, Mitigation Measures BIO-1 through BIO-5 would reduce these potential impacts to a less than significant level. As no new construction or other uses are proposed with Alternative 1, this alternative would not result in impacts to biological resources beyond those currently existing. As such, Alternative 1 is considered superior to the Proposed Project with regard to impacts to biological resources as the impacts to these resources would be greater with the Proposed Project than with Alternative 1.

Cultural Resources

As discussed in Section 4.5, the Proposed Project would result in potential impacts to unknown/undiscovered historical, and archaeological cultural resources. However, Mitigation Measures CUL-1 and CUL-2 would reduce these potential impacts to a less than significant level. As no new construction is proposed with Alternative 1, this alternative would not result in impacts to cultural resources. As such, the impacts to cultural resources under this alternative are less than the Proposed Project and Alternative 1 is considered superior to the Proposed Project with regard to impacts to cultural resources.

Energy

As discussed in Section 4.6, the only significant use of energy for the Proposed Project would be the equipment-fuel necessary for Project construction. It was determined that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. However, as Alternative 1 would not result in any change to existing conditions, it would not increase energy use beyond what is currently being used. As such, Alternative 1 is considered superior to the Proposed Project with regard to impacts to energy.

Geology, Soils, and Paleontological Resources

As discussed in Section 4.7, the Proposed Project would result in potential impacts to unknown paleontological resources. However, as defined in the Section 4.7, Mitigation Measure GEO-1 would reduce this potential impact to a less than significant level. As no new infrastructure or other uses are proposed with Alternative 1, this alternative would not result in the potential for geological, soil, or paleontological impacts. As such, the potential impacts to paleontological resources under this alternative are less than the Proposed Project and Alternative 1 Alternative 1 is considered superior to the Proposed Project with regard to impacts to geology, soils and paleontological resources.

Greenhouse Gases and Climate Change

As discussed in Section 4.8, and shown in Table 4.8.1, the Proposed Project's GHG emissions were determined to be less than significant because, while the Project does result in GHG emissions the Project emissions do not exceed SMAQMD construction GHG thresholds.

Alternative 1 would have no change in existing conditions and therefore no increase of GHG emissions would occur. As such, Alternative 1 is considered superior to the Proposed Project with regard to impacts from GHG and climate change.

Hazards and Hazardous Materials

As discussed in Section 4.9, the Proposed Project determined that the Project would not result in any impact from hazardous materials.

Alternative 1 is in the same location as the Proposed Project. As such, this alternative would have the same result regarding hazardous materials sites and hazards from the site. However, the Proposed Project would involve construction that could potentially expose people or the environment to hazardous materials such as an accidental hazardous material release. While this potential is considered remote, this potential would be nonexistent with Alternative 1 as no construction would occur. As such, Alternative 1 is considered superior to the Proposed Project with regard to impacts from hazardous materials.

Hydrology and Water Quality

The Proposed Project would have a less than significant impact to hydrology and water quality.

Alternative 1 would not result in any the construction. Alternative 1 would be the continuation of a use that currently exists and would not impact hydrology and water quality beyond those already existing. As such, Alternative 1 is considered superior to the Proposed Project with regard to impacts to hydrology and water quality.

Land Use

As with the Proposed Project, development of Alternative 1 would not result in the physical division of an established community or conflict with a habitat conservation plan or natural community conservation plan. As with the Proposed Project, Alternative 1 would not result in any changes to the zoning for the Project Site and therefore would not have any potential conflicts with existing City of Isleton land use policies or regulations. As such, impacts on land use would be the same for Alternative 1 as those anticipated under the Proposed Project.

Mineral Resources

The analysis presented in Section 4.12 determined that there were no impacts to mineral resources from development of the Proposed Project. Alternative 1 would have a similar impact.

Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. The City's Municipal Code prohibits any person from operating any tools or equipment used in construction work between the hours of 10:00 p.m. and 7:00 a.m. It is typical to regulate construction noise in this manner since construction noise is temporary, short-term, intermittent

in nature, and would cease on completion of the Project. Therefore, noise generated during construction activities, as long as conducted within the permitted hours, would not exceed City noise standards. During the operational phase, the Project would not generate noise audible to sensitive receptors.

Because Alternative 1 would not result in changes to the existing conditions of the site, no noise impacts would occur. Overall, Alternative 1 would have less of an impact related to noise than the Proposed Project.

Population and Housing

As discussed in Section 4.14, the Proposed Project would not result in an increase in permanent population or new housing to the area and the impact is considered less than significant.

No additional development of the site would occur under Alternative 1. As such, Alternative 1 would not result in population growth. Neither the Proposed Project nor Alternative 1 would remove housing or displace persons. As such, Alternative 1 would have the same impacts to population and housing as the Proposed Project.

Public Services

Section 4.15 discussed the impacts that the proposed Project would have to Public Services. This analysis determined that implementation of the Proposed Project would result in no impacts to law enforcement, fire protection, schools, and parks and recreation.

Alternative 1 would have no increase in development. The demand for public services would be the same as it exists currently. Alternative 1 would have the same result as the Proposed Project regarding public services.

Recreation

The analysis presented in Section 4.16 determined that the Proposed Project would have no impact on local recreation facilities and would not cause deterioration or the need for expanded or new facilities.

Alternative 1 would have no increase in population in the City. The demand for recreational facilities would be the same as it exists currently. As such, continuation of the existing use for Alternative 1 would have no impact to recreation. Alternative 1 would result in the same level of impact when compared to the Proposed Project regarding recreation.

Transportation and Circulation

As discussed in Section 4.17, the Proposed Project would have a less than significant impact to transportation and circulation and result in only a short-term minimal increase in traffic during construction. There would be minor traffic disruptions during replacement of the various pipelines within the streets for the Project.

Alternative 1 would result in no increases in traffic nor increases in the demand for public transit or bicycle/pedestrian facilities. Nor would Alternate 1 result in any traffic disruption during construction as

no construction would occur. As such, Alternative 1 would have less impact and considered superior when compared to the Proposed Project regarding transportation and circulation.

Tribal Cultural Resources

As discussed in Section 4.18, the Proposed Project would result in potential impacts to unknown/undiscovered Tribal resources. However, as defined in the IS/MND, Mitigation Measures CUL-1 and CUL-2 would reduce these potential impacts to a less than significant level. As no new construction is proposed with Alternative 1, this alternative would not result in impacts to cultural resources. As such, the impacts to cultural resources under this alternative are less than the Proposed Project and Alternative 1 is considered superior to the Proposed Project with regard to impacts to cultural resources.

Utilities

The Proposed Project would result in less than significant or no impacts to water, wastewater, stormwater drainage, and solid waste capacity and facilities. Alternative 1 would have no change over existing conditions. The demand for utilities would be the same as it exists currently. However, Alternative 1 would have the potential to result in impacts to the City's wastewater and storm water conveyance systems as the existing pipelines would continue to deteriorate and result in the City's inability to provide wastewater service adequate stormwater drainage in these areas. As such, Alternative 1 would result in a greater impact when compared to the Proposed Project regarding utilities.

Wildfire

The Proposed Project site is not located in an area at risk of wildfire. The Project would have no impact in this area. As Alternative 1 is located on the same site as the Proposed Project, Alternative 1 would result in the same level of impact when compared to the Proposed Project regarding wildfires.

6.2.3.2 Alternative 2: Partial Pipeline Replacement Alternative

As described above, Alternative 2 would include identifying and repairing segments of the wastewater system that are known to contribute to inflow and infiltration (I&I) and upgrading equipment at the WWTF to regain existing capacity and improve operations. Alternative 2 includes repairing the system to reduce the effect of I&I on treatment and capacity. This Alternative would replace or rehabilitate approximately 5,500 linear feet of pipe, including cleanouts and manholes. In addition, approximately 1,200 linear feet of storm drainpipe, including manholes and drains, would be installed to remove illicit storm drain connections from the sanitary sewer system and connect them to the storm drain system. Alternative 2 includes replacement of equipment that is nearing the end of its useful life to improve efficiency at the WWTF including new aeration equipment, updating electronic sensors and meters, a backup generator, and valving for the distribution to disposal ponds. This Alternative will not provide additional capacity to the WWTF but would free up existing capacity by reducing the amount of stormwater entering the system and reducing the accumulation of sludge in the ponds.

Aesthetics and Scenic Resources

Section 4.1 completed for the Proposed Project determined that the Project would not result in any significant impacts to aesthetics and scenic resources.

Alternative 2 would result in temporary construction on various streets and private land. However, as with the Proposed Project, would neither impact views of scenic resources nor substantially degrade the existing visual character or quality of the site. Alternative 2 would not introduce new sources of light and glare which would affect daytime or nighttime views in the area. Additionally, like the Proposed Project, those equipment improvements are minor upgrades and would have no impact to aesthetics and scenic resources. Therefore, Alternative 2 is considered similar to the Proposed Project with regard to impacts to aesthetics and scenic resources.

Agriculture and Forestry Resources

As discussed in Section 4.2, none of the Proposed Project is located on land identified as farmland; therefore the Project would not result in impacts to agricultural resources.

Alternative 2 would also not result in construction on land identified as farmland and as such would have no impact in this area. As such, Alternative 2 is considered the same as the Proposed Project with regard to impacts to agricultural resources.

Air Quality

As discussed in Section 4.3, the Project would generate air emissions during construction but would not exceed applicable air quality thresholds, not result in TAC impacts, and not conflict with regional air quality management planning.

Alternative 2 would have a shorter construction period as a result of no work being conducted on the WWTF disposal ponds. Similar to the Proposed Project, it would also not exceed any air quality thresholds and therefore a less than significant impact to air quality would occur. Because less construction would be required for Alternative 2 than the proposed Project, the impacts to air quality under this alternative are less than the Proposed Project.

Biological Resources

The Proposed Project would result in potential impacts to special status species. However, as defined in the IS/MND and BRA, Mitigation Measures BIO-1 through BIO-5 would reduce these potential impacts to a less than significant level. Alternative 2 would also result in construction of the pipeline, storm drainpipe, and upgrades to the WWTF in portions of the same area as the Proposed Project. However, unlike the Proposed Project, Alternative 2 does not include any construction at the WWTF drainage ponds that would potentially impact special status species, such as Western Pond Turtles and Giant Garter Snakes. As such, Alternative 2 would have similar impacts to biological resources and require similar mitigations such as BIO-1, BIO-4, and BIO-5.

Cultural Resources

The Proposed Project would result in potential impacts to unknown/undiscovered historical, archaeological resources. However, Mitigation Measures CUL-1 and CUL-2 would reduce these potential impacts to a less than significant level. As trenching would be required with Alternative 2, this alternative would also result in potential impacts to unknown cultural resources and require mitigation. As such, the impacts to cultural resources under this alternative are the same as the Proposed Project.

Energy

As discussed in Section 4.6, the only significant use of energy for the Proposed Project would be the equipment-fuel necessary for Project construction. It was determined that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Alternative 2 is a smaller project with a shorter construction time that the Proposed Project. As a result, Alternative 2 would use less energy. However, there would be an impact to energy because the project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation. It was determined that this would not be the case under the Proposed Project. Alternative 2 would have the same result. As such, Alternate 2 is similar to the Proposed Project in the use of energy.

Geology, Soils, and Paleontological Resources

The Proposed Project would result in potential impacts to unknown paleontological resources. However, as defined in the Section 4.7, Mitigation Measure GEO-1 would reduce this potential impact to a less than significant level. Trenching and ground penetration would also be required with Alternative 2 to install the pipelines and would require mitigations, such as Mitigation Measure GEO-1, to reduce the impact to a less than significant level. Therefore, similar to the Proposed Project, this alternative would also result in potential impacts to unknown paleontological resources and require mitigation. As such, the impacts to paleontological resources under this alternative are the same as the Proposed Project.

Greenhouse Gases and Climate Change

As discussed in Section 4.8, and shown in Table 4.8.1, the Proposed Project's GHG emissions were determined to be less than significant. While the Project does result in GHG emissions, the Project emissions do not exceed SMAQMD construction GHG thresholds.

As Alternative 2 would have less construction than the Proposed Project, GHG emissions from construction would be proportionally less. Alternative 2 would have the same operational GHG emissions as the Project. As such, Alternative 2 is considered superior to the Proposed Project with regard to impacts from GHG and climate change.

Hazards and Hazardous Materials

As discussed in Section 4.9, the Proposed Project determined that the Project would not result in any impact from hazardous materials.

Aside from the work being done to the disposal ponds, Alternative 2 is in the same location as the Proposed Project. While Alternative 2 would not include the improvements to the disposal pond berms to increase capacities at the WWTF, the potential for the release of a hazardous material is the same as the Proposed Project with the replacement of the wastewater and storm drainage pipelines. As such, this alternative would have the same result regarding hazardous materials sites and hazards from the site. As such, Alternative 2 is considered the same as the Proposed Project with regard to impacts from hazardous materials.

Hydrology and Water Quality

The Proposed Project would have a less than significant impact to hydrology and water quality.

While Alternative 2 would be smaller in area than the Proposed Project, Alternative 2 would be more than 1 acre in area and therefore require a SWPPP for the protection of water quality. As with the Proposed Project, Alternative 2 would be required to implement a SWPPP, with minimum BMPs during construction, which will have the same effect as a SWPPP.

As such, Alternative 2 is considered to be the same as the Proposed Project with regard to impacts to hydrology and water quality.

Land Use

As with the Proposed Project, development of Alternative 2 would not result in the physical division of an established community or conflict with a habitat conservation plan or natural community conservation plan. Also, Alternative 2 would not result in any changes to the zoning for the Project Site and therefore would not have any potential conflicts with existing City of Isleton land use policies or regulations. As such, impacts on land use would be the same for Alternative 2 as those anticipated under the Proposed Project.

Mineral Resources

The IS determined that there were no impacts to mineral resources from development of the Proposed Project. Alternative 2 would have a similar impact.

Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. The City's Municipal Code states that the operation of any pile-driver, stream-shovel, pneumatic hammer, derrick, stream or electric hoist or other appliance, the use of which is attended by loud or unusual noise, any power saw, power planer, or other powered tool or appliance or

saw or hammer, or other tool, so as to disturb the quiet, comfort, or repose of persons in any dwelling, hotel, apartment, or other type of residence, or of any person in the vicinity, is prohibited between the hours of 10:00 p.m. and 7:00 a.m. It is typical to regulate construction noise in this manner since construction noise is temporary, short-term, intermittent in nature, and would cease on completion of the Project. Therefore, noise generated during construction activities, as long as conducted within the permitted hours, would not exceed City noise standards.

Alternative 2 would also be subject to the City's Municipal Code. As with the Proposed Project, Alternative 2 would not have any operational noise audible to sensitive receptors. As such, Alternative 2 would have a similar result regarding noise when compared to the Proposed Project.

Population and Housing

The Proposed Project would not result in an increase in permanent population or new housing to the area and the impact is considered less than significant.

No additional development of the Site would occur under Alternative 2. As such, Alternative 2 would not result in population growth. Neither the Proposed Project nor Alternative 2 would remove housing or displace persons. As such, Alternative 2 would have the same impacts to population and housing as the Proposed Project.

Public Services

Section 4.15 discussed the impacts the Proposed Project would have to public services. This analysis determined that implementation of the Proposed Project would result in no impacts to law enforcement, fire protection, schools, and parks and recreation.

Alternative 2 would have no increase in development. The demand for public services would be the same as it exists currently. As such, Alternative 2 would have no impact to public services. Alternative 2 would have the same result as the Proposed Project regarding public services.

Recreation

The Section 4.16 determined the Proposed Project would have no impact on local recreation facilities and would not cause deterioration or the need for expanded or new facilities.

Alternative 2 would have no increase in population in the City. The demand for recreational facilities would be the same as it exists currently. Alternative 2 would result in the same level of impact when compared to the Proposed Project regarding recreation.

Transportation and Circulation

As discussed in Section 4.17, the Proposed Project would have a less than significant impact to transportation and circulation and result in only a short-term minimal increase in traffic during construction.

Alternative 2 would result in similar increases in traffic and street disruption during construction as the Proposed Project. As such, Alternative 2 would have the same as the Proposed Project regarding transportation and circulation.

Tribal Cultural Resources

As discussed in Section 4.18, the Proposed Project would result in potential impacts to unknown/undiscovered tribal resources. However, Mitigation Measures CUL-1 and CUL-2 would reduce these potential impacts to a less than significant level.

As trenching would be required with Alternative 2, this alternative would also result in potential impacts to unknown Tribal resources and require mitigation. As such, the impacts to Tribal resources under this alternative are the same as the Proposed Project.

Utilities

The Proposed Project would result in less than significant or no impacts to water, wastewater, stormwater drainage, and solid waste capacity and facilities.

Alternative 2 would have no change over existing conditions for water, stormwater drainage, and solid waste. However, the Proposed Project's upgrades to the WWTF disposal ponds are considered to be necessary for the continued operation of the facility and without these upgrades, the WWTF would operate at a diminished capacity and may not be as efficient at removing wastewater impurities. As such, Alternative 2 would result in a greater impact when compared to the Proposed Project regarding utilities.

Wildfire

The Proposed Project site is not located in an area at risk of wildfire. The Project would have no impact in this area. As Alternative 2 is located on the same site as the Proposed Project, Alternative 2 would result in the same level of impact when compared to the Proposed Project regarding wildfires.

6.2.3.3 Alternative 3: Disposal Ponds Improvements

Alternative 3 would only make improvements to the WWTF disposal ponds. No sewer pipelines or storm drain improvements would be completed as a part of this alternative. There are two methods considered for improving the disposal ponds: raising the existing pond berms to increase their capacity or constructing an additional disposal pond. Additional disposal ponds could be constructed, but the City would need to acquire a neighboring parcel, as the City does not own any undeveloped land near the WWTF. Neighboring parcels are used for agricultural purposes, which is a large portion of the City's economy. Eminent domain can be a lengthy and costly process, so raising the existing pond berms would be the preferred improvement for Alternative 3.

Aesthetics and Scenic Resources

Section 4.1 completed for the Proposed Project determined that the Project would not result in any significant impacts to aesthetics and scenic resources.

Alternative 3 would result in temporary construction at the WWTF's disposal ponds. However, as with the Proposed Project, would neither impact views of scenic resources nor substantially degrade the existing visual character or quality of the site. Alternative 3 would not introduce new sources of light and glare which would affect daytime or nighttime views in the area. Additionally, like the Proposed Project, the improvements to the existing disposal pond berms, or the construction of a new disposal pond on an alternative parcel of land not currently owned by the City would be minor upgrades and would have no impact to aesthetics and scenic resources. Therefore, Alternative 3 is considered similar to the Proposed Project with regard to impacts to aesthetics and scenic resources.

Agriculture and Forestry Resources

As discussed in Section 4.2, none of the Proposed Project is located on land identified as farmland; therefore, the Project would not result in impacts to agricultural resources.

The preferred method for Alternative 3, which is raising the berms on all disposal and treatment ponds, would also not result in construction on land identified as farmland and as such would have no impact in this area. However, all the land surrounding the WWTF is identified as Prime Farmland by DOC. If a new pond is developed adjacent to the existing WWTF, this would result in an impact to agricultural resources. As such, Alternative 3 is considered to have a greater impact on agricultural resources when compared to the Proposed Project.

Air Quality

As discussed in Section 4.3, the Project would generate air emissions during construction but would not exceed applicable air quality thresholds, not result in TAC impacts, and not conflict with regional air quality management planning.

Alternative 3 would potentially have a shorter construction period as a result of no work being conducted on the pipelines and WWTF facilities. Similar to the Proposed Project, it would also not exceed any air quality thresholds and therefore a less than significant impact to air quality would occur. Alternative 3 would include the raising of the disposal pond berms. However, the non-preferred method of Alternative 3, which includes acquiring land to construct new disposal berms, has the potential to increase the amount of truck trips and therefore increase the air quality emissions associated with those truck trips. However, because this method is not cost-effective, it is not the preferred method for Alternative 3. Because less construction would be required for Alternative 3 than the Proposed Project, the impacts to air quality under this alternative are less than the Proposed Project.

Biological Resources

The Proposed Project would result in potential impacts to special status species. However, as defined in the IS/MND and BRA, Mitigation Measures BIO-1 through BIO-5 would reduce these potential impacts to a less than significant level. Alternative 3 includes construction at the WWTF drainage ponds that would potentially impact special status species, such as Western Pond Turtles and Giant Garter Snakes. As such, Alternative 3 would have similar impacts to biological resources and require similar mitigations such as BIO-2 and BIO-3.

Cultural Resources

The Proposed Project would result in potential impacts to unknown/undiscovered historical, archaeological resources.

As no trenching would be required with Alternative 3 for raising the existing pond berms, this alternative would not result in potential impacts to unknown cultural resources and therefore not require mitigation in this case. However, if a new pond is required, ground disturbance may be needed and mitigation similar to the Proposed Project's cultural resources mitigation would be required. As with the Proposed Project, this mitigation would reduce potential impacts to less than significant level. As such, the impacts to cultural resources under this alternative because no ground disturbance is anticipated with raising the pond berms are less than those of the Proposed Project.

Energy

As discussed in Section 4.6, the only significant use of energy for the Proposed Project would be the equipment-fuel necessary for Project construction. It was determined that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

Alternative 3 is a smaller project with a shorter construction time that the Proposed Project. As a result, Alternative 3 would use less energy. However, there would be an impact to energy if the project would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation. It was determined that this would not be the case under the Proposed Project. Alternative 3 would have the same result, under the preferred method of raising the disposal pond berms in lieu of purchasing land and constructing new berms. As such, Alternative 3 is similar to, or less than the Proposed Project in the use of energy.

Geology, Soils, and Paleontological Resources

The Proposed Project would result in potential impacts to unknown paleontological resources. However, as defined in the Section 4.7, Mitigation Measure GEO-1 would reduce this potential impact to a less than significant level.

Trenching and ground penetration would not be required with Alternative 3 to upgrade the berms of the disposal ponds and would not require mitigations. However, if a new pond is required, ground disturbance may be needed and mitigation similar to the Proposed Project's paleontological resources mitigation would be required. As with the Proposed Project, this mitigation would reduce potential impacts to less than significant level. As such, the impacts to paleontological resources under this alternative because no ground disturbance is anticipated with raising the pond berms are less than those of the Proposed Project.

Greenhouse Gases and Climate Change

As discussed in Section 4.8, and shown in Table 4.8.1, the Proposed Project's GHG emissions were determined to be less than significant. While the Project does result in GHG emissions, the Project emissions do not exceed SMAQMD construction GHG thresholds.

As the preferred method for Alternative 3 would have less construction than the Proposed Project with respect to the trenching for underground piping but would increase the GHG emissions with the increase in haul truck trips during the work involved in increasing the disposal pond berm heights, GHG emissions from construction would be similar. Alternative 3 would have more operational GHG emissions as the Project, as the equipment efficiency would be lower under Alternative 3, and therefore produce greater amounts of GHG emissions. As such, the impacts to GHG and climate change under the preferred method for Alternative 3 are similar to or less than the Proposed Project.

Hazards and Hazardous Materials

As discussed in Section 4.9, the Proposed Project determined that the Project would not result in any impact from hazardous materials.

Aside from the work being done to the underground facilities associated with the pipeline construction, Alternative 3 is in the same location as the Proposed Project. While Alternative 3 would not include the improvements to the WWTF and underground facilities, the potential for the release of a hazardous material is the same as the Proposed Project with the increase in berm height of the disposal ponds. As such, this alternative would have the same result regarding hazardous materials sites and hazards from the site. As such, Alternative 3 is considered the same as the Proposed Project with regard to impacts from hazardous materials.

Hydrology and Water Quality

The Proposed Project would have a less than significant impact to hydrology and water quality.

While Alternative 3 would be smaller in area than the Proposed Project, Alternative 3 would be more than 1 acre in area and therefore require a SWPPP for the protection of water quality. As with the Proposed Project, Alternative 3 would be required to implement a SWPPP, with minimum BMPs during construction, which will have the same effect as a SWPPP.

As such, Alternative 3 is considered to be the same as the Proposed Project with regard to impacts to hydrology and water quality.

Land Use

As with the Proposed Project, development of Alternative 3 would not result in the physical division of an established community or conflict with a habitat conservation plan or natural community conservation plan.

As with the Proposed Project, Alternative 3 would not result in any changes to the zoning for the Project Site and therefore would not have any potential conflicts with existing City of Isleton land use policies or

regulations. As such, impacts on land use would be the same for Alternative 3 as those anticipated under the Proposed Project.

Mineral Resources

The IS determined that there were no impacts to mineral resources from development of the Proposed Project. Alternative 3 would have a similar impact.

Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. The City's Municipal Code states that the operation of any pile-driver, stream-shovel, pneumatic hammer, derrick, stream or electric hoist or other appliance, the use of which is attended by loud or unusual noise, any power saw, power planer, or other powered tool or appliance or saw or hammer, or other tool, so as to disturb the quiet, comfort, or repose of persons in any dwelling, hotel, apartment, or other type of residence, or of any person in the vicinity, is prohibited between the hours of 10:00 p.m. and 7:00 a.m. It is typical to regulate construction noise in this manner since construction noise is temporary, short-term, intermittent in nature, and would cease on completion of the Project. Therefore, noise generated during construction activities, as long as conducted within the permitted hours, would not exceed City noise standards.

Alternative 3 would also be subject to the City's Municipal Code. As with the Proposed Project, Alternative 3 would not have any operational noise audible to sensitive receptors. As such, Alternative 3 would have a similar result regarding noise when compared to the Proposed Project.

Population and Housing

The Proposed Project would not result in an increase in permanent population or new housing to the area and the impact is considered less than significant.

No additional development of the Site would occur under Alternative 3. As such, Alternative 3 would not result in population growth. Neither the Proposed Project nor Alternative 3 would remove housing or displace persons. As such, Alternative 3 would have the same impacts to population and housing as the Proposed Project.

Public Services

Section 4.15 discussed the impacts the Proposed Project would have to public services. This analysis determined that implementation of the Proposed Project would result in no impacts to law enforcement, fire protection, schools, and parks and recreation.

Alternative 3 would have no increase in development. The demand for public services would be the same as it exists currently. As such, Alternative 3 would have no impact to public services. Alternative 3 would have the same result as the Proposed Project regarding public services.

Recreation

The Section 4.16 determined the Proposed Project would have no impact on local recreation facilities and would not cause deterioration or the need for expanded or new facilities.

Alternative 3 would have no increase in population in the City. The demand for recreational facilities would be the same as it exists currently. Alternative 3 would result in the same level of impact when compared to the Proposed Project regarding recreation.

Transportation and Circulation

As discussed in Section 4.17, the Proposed Project would have a less than significant impact to transportation and circulation and result in only a short-term minimal increase in traffic during construction.

Alternative 3 would result in similar increases in traffic but street disruption during construction would not occur to the extent of the Proposed Project. As such, Alternative 3 would have less impact regarding transportation and circulation than the Proposed Project.

Tribal Cultural Resources

As discussed in Section 4.18, the Proposed Project would result in potential impacts to unknown/undiscovered tribal resources. However, as defined in the IS, Mitigation Measures CUL-1 and CUL-2 would reduce these potential impacts to a less than significant level.

As no trenching would be required with Alternative 3 for raising the existing pond berms, this alternative would not result in potential impacts to unknown tribal cultural resources and therefore not require mitigation in this case. However, if a new pond is required, ground disturbance may be needed and mitigation similar to the Proposed Project's tribal cultural resources mitigation would be required. As with the Proposed Project, this mitigation would reduce potential impacts to less than significant level. As such, the impacts to tribal cultural resources under this alternative because no ground disturbance is anticipated with raising the pond berms are less than those of the Proposed Project.

Utilities

The Proposed Project would result in less than significant or no impacts to water, wastewater, stormwater drainage, and solid waste capacity and facilities.

Alternative 3 would have no change over existing conditions for water, stormwater drainage, and solid waste. However, the Proposed Project's equipment upgrades to the WWTF are considered to be necessary for the continued operation of the facility and without these upgrades, the WWTF would operate at a diminished capacity and may not be as efficient at removing wastewater impurities. As such, Alternative 3 would result in a greater impact when compared to the Proposed Project regarding utilities.

Wildfire

The Proposed Project Site is not located in an area at risk of wildfire. The Project would have no impact in this area. As Alternative 3 is located on the same site as the Proposed Project, Alternative 3 would result in the same level of impact when compared to the Proposed Project regarding wildfires.

6.3 Environmentally Superior Alternative

Table 6.0-2 summarizes the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the Proposed Project. Table 6.0-3 identifies how well an alternative meets the Project objectives. Based on the evaluation contained in Section 6.2, Alternative 1 would have fewer adverse environmental impacts than the Proposed Project and was determined to have the fewest adverse impacts on the physical environment. However, CEQA requires that when the environmentally superior alternative is the No Project Alternative, another alternative must be identified as the environmentally superior alternative [CEQA Guidelines section 15126.6(e)(2)]. In this case, the Proposed Project would be superior to Alternatives 2 and 3 as the Project would have the same or similar environmental impact as Alternative 2 and Alternative 3 but would provide greater improvements to the City's wastewater and stormwater systems.

The Proposed Project has three objectives. Table 6.0-3 illustrates a comparison of the alternatives to the basic Project objectives. As shown in this table, neither Alternative 1 or Alternative 2 meet any of the Project objectives.

The Proposed Project's potential impacts to the physical environment could be mitigated to a less than significant level. While Alternative 1, 2, and 3 would have less or equal impact to the environment for the majority issue areas when compared to the Proposed Project, the impact to utilities would be greater. This is because Alternatives 1, 2, and 3 do not meet the objectives for the Project, and because the Project's impacts could be mitigated to a less than significant level, the environmentally superior alternative would be the Proposed Project.

Table 6.0-2. Alternatives Impacts Comparison

Environmental Issue Area	Proposed Project Impact Finding (Mitigated)	Alternatives		
		1	2	3
Aesthetics and Visual Resources	Less Than Significant	-	=	=
Agriculture and Forestry Resources	Less Than Significant	=	=	+
Air Quality	Less Than Significant	-	-	-
Biological Resources	Less Than Significant	-	=	=
Cultural Resources	Less Than Significant	-	=	=
Energy	Less Than Significant	-	=	=
Geology and Soils	Less Than Significant	-	=	-
Greenhouse Gases and Climate Change	Less Than Significant	-	-	=
Hazards and Hazardous Materials	Less Than Significant	-	=	=
Hydrology and Water Quality	Less Than Significant	-	=	=
Land Use	Less Than Significant	=	=	=
Mineral Resources	Less Than Significant	=	=	=
Noise	Less Than Significant	-	=	=
Population and Housing	Less Than Significant	=	=	=
Public Services	Less Than Significant	=	=	=
Recreation	Less Than Significant	=	=	=
Transportation	Less Than Significant	-	=	=
Tribal Cultural Resources	Less Than Significant	-	=	-
Utilities	Less Than Significant	+	+	+
Wildfire	Less Than Significant	=	=	=
Overall Determination		-	=	=

- Impacts less than those of the proposed project
+Impacts greater than those of the proposed project
= Impacts similar to those of the proposed project, or no better or worse

Table 6.0-3. Comparison of Alternatives by Project Objectives

Objective	Alternatives		
	1	2	3
Replacement of existing wastewater and storm water pipelines and WWTF improvements needed to continue to provide adequate wastewater treatment and storm water infrastructure in the City.	-	=	-
Improve the existing ability of the City to convey wastewater and storm water in an area with failing infrastructure.	-	-	-
Improve the wastewater and stormwater conveyance within the City in a cost-effective manner with minimal disruption of service.	-	-	-

= Meets project objective
- Does not meet project objective

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