DRAFT

CEQA Plus Initial Study and Mitigated Negative Declaration

P STREET LIFT STATION PROJECT

City of Live Oak, California

Prepared For:

LIVE OAK
CALIFORNIA

City of Live Oak
9955 Live Oak Boulevard
Live Oak, California 95953

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

55 Hanover Lane, Suite A
Chico, California 95973

December 2022

DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency:	City of Live Oak
Project Proponent:	City of Live Oak
Project Location:	The Project area is located in the City of Live Oak, on a City-owned parcel of land and within a City street right-of-way (ROW) and sewer easements along streets within the City including: • Sewer Project component: Date Street • Drainage Project component: Date Street • Lift Station (new backup generator, wet well, pumps, valves, piping, flowmeter, vaults; perimeter CMU wall with two access gates; improvements to the electrical and controls building including a new roof; asphalt paving of the Site; new box culvert within the drainage ditch onsite; and other various improvements). See (*Figure 1. Regional Location* and *Figure 2. Project Location*). The Project is located in the northern half of Section 21 of Township 16 North, Range 3 East, (Mount Diablo Principal Meridian). The approximate center of the Site is located at latitude 39º16'19.26" N and longitude 121º39'59.91" W.

Project Description:

The Proposed Project entails the upgrade of the City of Live Oak's (City) existing wastewater lift station and associated onsite facilities located on the northwest corner of P Street and Date Street. The Project requires of the demolition of approximately 0.14 mile of existing sewage and storm drain pipelines; construction of a new wet well, installation of three new pumps, valves, piping, and a flowmeter with associated vaults; replacement of the existing motor control center, backup generator, and other electrical improvements; replacement of gravity wastewater piping and structures; a new perimeter concrete masonry unit (CMU) wall with two access gates; improvements to the electrical and controls building including a new roof; asphalt paving of the Site; storm drainage and sewage infrastructure within the adjacent roadway ROW of Date Street; the installation of a new box culvert within the drainage ditch onsite (between the lift station and the proposed staging area); and other various improvements.

Public Review Period: December 22, 2022 to January 20, 2023

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Air Quality

AQ-1: The Project applicant and/or its contractor shall require that all Project earth-moving equipment (excavators, used during construction activities shall be California Air Resources Board (CARB) Tier 4 Certified, as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.

Timing/Implementation: *During construction*

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

Biological Resources

BIO-1: Worker Environmental Awareness Program. A qualified biologist should conduct a mandatory Worker Environmental Awareness Program for all contractors, work crews, and any onsite personnel to aid workers in recognizing special-status species and sensitive biological resources that may occur onsite. The program shall include identification of the special-status species and their habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and Mitigation Measures required to reduce impacts to biological resources within the work area.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-2: Nesting Bird Work Window. If construction is to be initiated during the nesting season (generally February 1 through August 31), conduct a preconstruction nesting bird survey of all suitable nesting habitat in and adjacent to the Project site within 14 days of the commencement of construction. The survey shall be conducted in accessible areas within a 500-foot radius of Project work areas for raptors and within a 100-foot radius for other nesting birds. 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 a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival or the nest is otherwise no longer occupied.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-3: Pre-construction Bat Roost Surveys. Bat roost surveys shall be conducted by a qualified wildlife biologist within 14 days prior to removal of any tree having the potential to provide bat roosting habitat. Locations of vegetation and tree removal or excavation will be examined for potential bat roosts. Specific survey methodologies will be determined by a qualified biologist and consistent with any applicable recommendations or requirements of CDFW, and may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat or,

observations of bat sign (e.g., guano), or use of ultrasonic detectors (e.g., SonoBat, Anabat). Removal of any significant roost sites located will be avoided to the extent feasible.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-4: Minimize disturbance to Bat Roosts. If it is determined that an active roost site cannot be avoided and will be affected, the biologist shall notify and consult with CDFW on appropriate bat exclusion methods and roost removal procedures.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-5: Pre-construction Protected Oak Trees Survey. A certified arborist shall conduct a survey to evaluate any trees proposed to be removed or disturbed.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-6: Minimize disturbance to Protected Oak Trees. The applicant shall consult with the City to develop measures to preserve protected trees or mitigate their loss.

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

Monitoring/Enforcement: *City of Live Oak*

Cultural Resources

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, 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 archaeology, 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 lead agencies. The agencies 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, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sutter County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 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 (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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: *During construction*

Monitoring/Enforcement: *City of Live Oak*

Geology and Soils

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 Live Oak 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 Live Oak Public Works*

Noise

NOI-1: The following measures shall be applied to the Project during construction:

1. All construction equipment, fixed or mobile, will be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.

2. All stationary construction equipment will be placed so that emitted noise is directed away from the noise sensitive receptors nearest the Project Site (the residences to the north and west of the site).

3. As applicable, shut off all equipment when not in use.

4. Equipment staging shall be located in areas that create the greatest distance between construction-related noise/vibration sources and sensitive receptors to the north and west of the site.

5. Jackhammers, pneumatic equipment, and all other portable stationary noise sources will be directed away from the residences to the north and west of the site to the extent possible. Either one-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between equipment and the nearest off-site residences. The shielding should be without holes and cracks.

6. No amplified music and/or voice will be allowed on the construction site.

Timing/Implementation:	*During construction*
Monitoring/Enforcement:	*The City of Live Oak Planning Department and construction lead*

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LIST OF ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
AB	aggregate base
AB	Assembly Bill
AC	asphalt concrete
AMSL	Above mean sea level
APE	Area of Potential Effects
APN	Accessor Parcel Number
BMPs	Best Management Practices
BP	Before present
BRA	Biological Resource Assessment
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
cfs	Cubic feet per second
CGS	California Geological Survey
CH_4	Methane
CHRIS	California Historical Resources Information System
City	City of Live Oak
CMU	concrete masonry unit
CNDDB	California Natural Diversity Database
CNEL	Community noise equivalent level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
County	Sutter County
CRHR	California Register of Historic Places
CUPA	Certified Unified Program Agency
CWA	Federal Clean Water Act
cy	cubic yards
CWSRF	Clean Water State Revolving Fund
DMR	Division of Mine Reclamation
DOC	California Department of Conservation
DOF	Department of Finance
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control

LIST OF ACRONYMS AND ABBREVIATIONS

DWR	Department of Water Resources
EIR	Environmental Impact Report
ESA	Endangered Species Act
fc	Foot-candle
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FRAQMD	Feather River Air Quality Management District
FTA	Federal Transit Administration
GHGs	Greenhouse Gases
GLO	General Land Office
gpd	gallons per day
gpm	gallons per minute
HMP	Hazardous Materials Business Plan
IS	Initial Study
IS/MND	Initial Study/Mitigated Negative Declaration
L_{dn}	Day-night average sound level
L_{eq}	Equivalent continuous sound level
LO-01	Lateral No. 2
LO-02	Date Street (historic-era subdivision road)
LO-03	P Street (historic-era subdivision road)
LOS	Level of service
MBTA	Migratory Bird Treat Act
mg	million gallons
MGD	million gallons per day
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zones
MTBA	Migratory Bird Treaty Act
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NEIC	North Central Information Center
NEPA	National Environmental Policy Act
ND	Negative Declaration
NHPA	National Historic Preservation Act
NOI	Notice of Intent
NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service

LIST OF ACRONYMS AND ABBREVIATIONS

NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSVAB	Northern Sacramento Valley Air Basin
OHP	California Office of Historic Preservation
PM_{10} and $PM_{2.5}$	Particulate Matter
PRC	Public Resource Code
Project/ Proposed Project	Live Oak P Street Lift Station Project
RCEM	Roadway Construction Emissions Model
RD777	Reclamation District 777
ROG	Reactive Organic Gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SMAQMD	Sacramento Metropolitan Air Quality Management District
SCH	State Clearinghouse
SMARA	Surface Mining and Reclamation Act of 1975
SO_2	sulfur dioxide
SR	State Route
SSC	Species of special concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
UCMP	California Museum of Paleontology
USACE	United States Army Corps of Engineers
USC	U.S. Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled

1 BACKGROUND

1.1 Summary

Project Title:	Live Oak P Street Lift Station Project
Lead Agency Name and Address:	City of Live Oak 9955 Live Oak Blvd. Live Oak, California 95953
Contact Person and Phone Number:	Ron Walker, Public Works Director (530) 695-2112
Project Owner	City of Live Oak
Project Location:	The Project area is located in the City of Live Oak, on a City-owned parcel of land and within a City street ROW and sewer easements along streets within the City including: • Sewer Project component: Date Street • Drainage Project component: Date Street • Lift Station (new backup generator, wet well, pumps, valves, piping, flowmeter, vaults; perimeter CMU wall with two access gates; improvements to the electrical and controls building including a new roof; asphalt paving of the Site; new box culvert within the drainage ditch onsite; and other various improvements). See (*Figure 1. Regional Location* and *Figure 2. Project Location*). The Project is located in the northern half of Section 21 of Township 16 North, Range 3 East, (Mount Diablo Principal Meridian). The approximate center of the Site is located at latitude 39º16'19.26" N and longitude 121º39'59.91" W.
General Plan Designation:	Civic
Zoning:	Small Lot Residential (R-2)

1.2 Introduction

The City of Live Oak (City) is the Lead Agency for this Initial Study (IS). The Initial Study has been prepared to identify and assess the anticipated environmental impacts of the City's Live Oak P Street Lift Station Project (Project or Proposed Project). This document has been prepared to satisfy the California Environmental Quality Act (CEQA) (Public Resource Code [PRC], § 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 Initial Study 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's) CWSRF Program, which is partially funded through the Environmental Protection Agency (EPA). Because of the federal nexus with the EPA, 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 Live Oak P Street Lift Station 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 the criteria above, the City of Live Oak (City) is the lead agency for the Proposed Project.

1.4 Purpose and Document Organization

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed Live Oak P Street Lift Station 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.

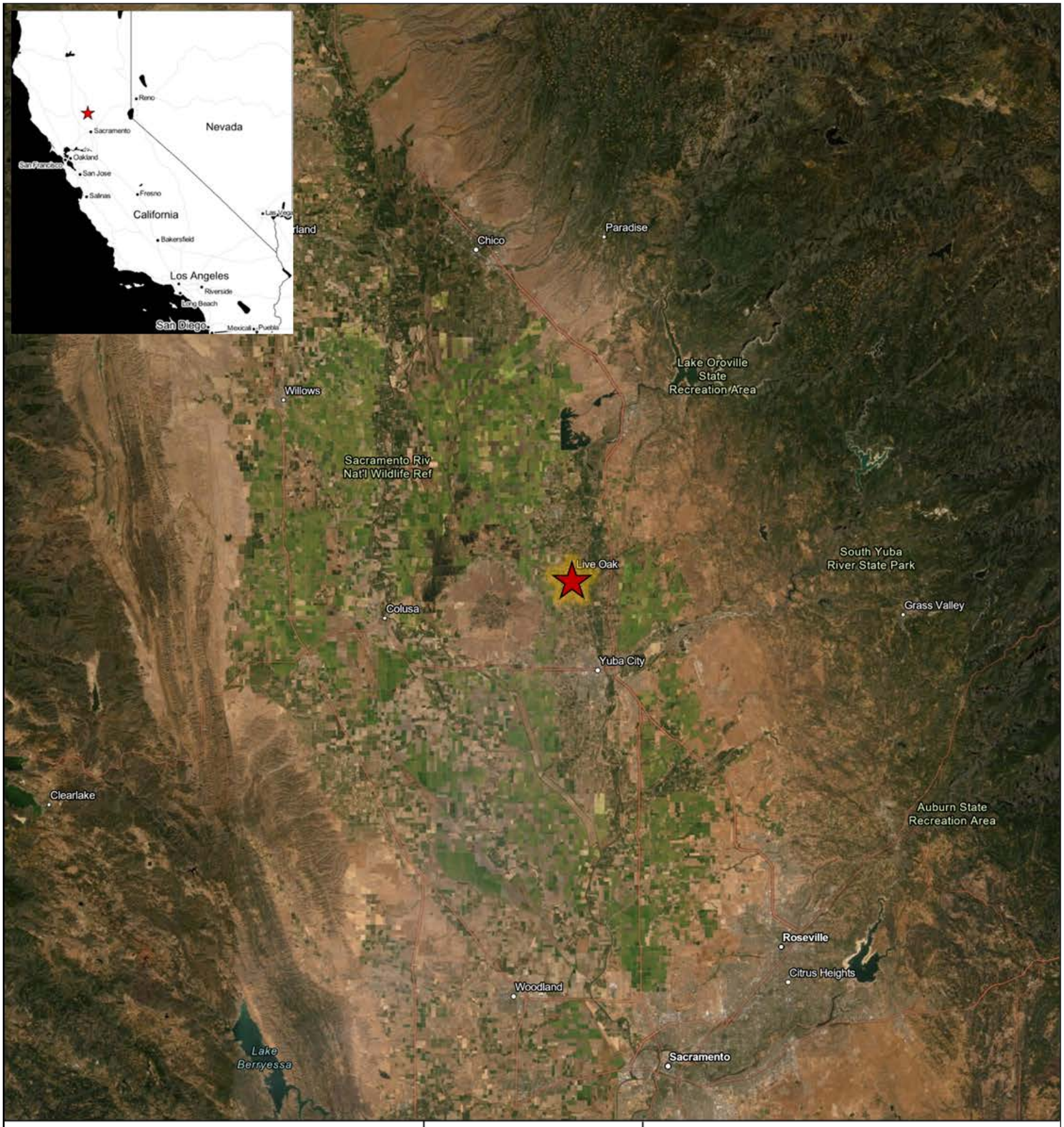
1.5 Project Location and Surrounding Land Uses

The Project area is located in the City of Live Oak. The city boundaries cover approximately 1,165 acres (approximately two square miles). As illustrated in *Figure 1. Regional Location* and *Figure 2. Project Location*, the majority of the Proposed Project is located on the City-Owned Parcel containing the existing City of Live Oak lift station, with a minor portion within the street ROW. Adjacent uses include single-family homes, a City park, a church, and a senior-living neighborhood. See *Figure 3. Surrounding Uses*.

1.6 Environmental Setting

Live Oak is located in the northeastern portion of Sutter County, west of the Feather River, in the northern portion of the Sacramento Valley (see Figures 1 and 2). Approximately 15 miles to the east of Live Oak are the Sierra Nevada foothills. Sutter Buttes is located approximately five miles to the southwest of the city. Lice Oak is approximately 10 miles north of Yuba City and six miles south of the City of Gridley. Other nearby cities include Biggs, Oroville, Sacramento, and Marysville. Live Oak is surrounded by orchards, rice fields, and grazing lands in Sutter County, with some rural scale residences mixed in with this predominantly agricultural landscape. The land is predominately flat and has rich agricultural soils.

The City of Live Oak is a relatively small city with an estimated 2022 population of 9,394 (DOF 2022). The Project Site is located on the northwest corner of P Street and Date Street in the city. Surrounding uses include a small park, the Date Street Senior Village apartment complex and single-family homes to the east, and single-family homes to the north, south, and west of the Project Site. See Figure 3.



Project Site

N
W E
S

1:780,511

0 5 10 20 mi

0 10 20 40 km

California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, Earthstar Geographics

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10/18/2021

Figure 1. Regional Location
"P" Street Lift Station

Project Boundary

N
W E
S

1:3,049

0 0.03 0.06 0.11 m

0 0.04 0.09 0.17 km

California State Parks, Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, Earthstar Geographics

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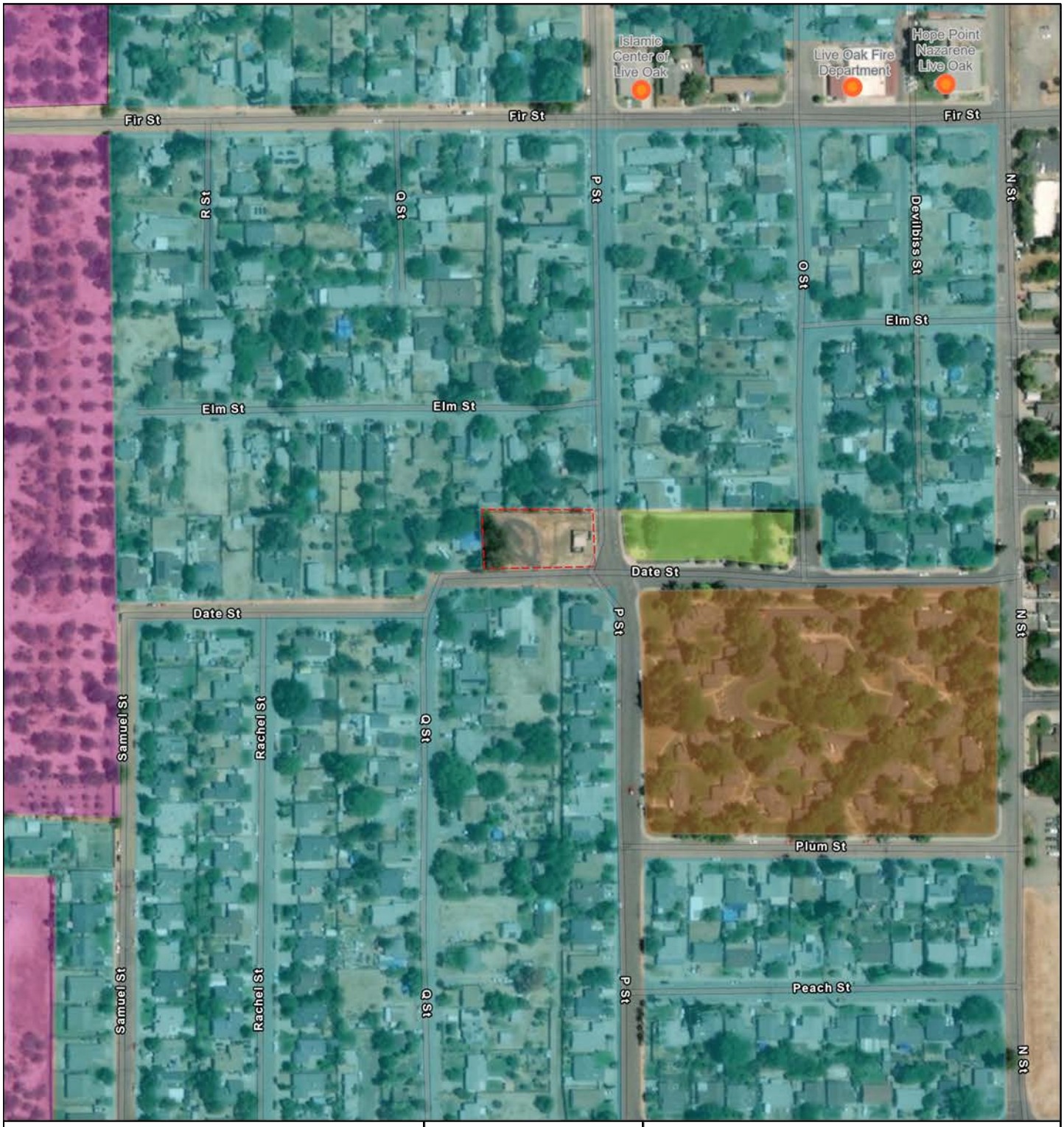
10/5/2022

Figure 2. Project Location
"P" Street Li t Station



Project Boundary

Surrounding Land Uses

Surrounding Land Use Areas

Single-Family Residential

Vacant Land

Parkland

Senior Living

N

W E

S

1:2,257

0 0.02 0.04 0.07 mi

0 0.03 0.06 0.12 km

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10/5/2022

Figure 3. Surrounding Land Uses
"P" Street Lift Station

2 PROJECT DESCRIPTION

2.1 Project Characteristics

The Proposed Project, located at the northwestern corner of the intersection of P Street and Date Street on two parcels of land totaling 0.5 acres with County Assessor Parcel Numbers (APNs) 006-241-001 (Lift Station) and 006-241-002 (staging area and drainage ditch west of the lift station; see Figure 2. The Project consists of the demolition of approximately 0.14 miles of existing sewage and storm drain pipelines (see Figure 5); construction of a new wet well, installation of three new pumps, valves, piping, and a flowmeter with associated vaults; replacement of the existing motor control center, backup generator, and other electrical improvements; replacement of gravity wastewater piping and structures; a new perimeter CMU wall with two access gates; improvements to the electrical and controls building including a new roof; asphalt paving of the Site; drainage infrastructure within the adjacent roadway ROW of Date Street and P Street; the installation of a new box culvert within the drainage ditch onsite (between the lift station and the proposed staging area); and other various improvements (see Figure 6).

The P Street Lift Station collects wastewater from a nearly built-out portion of the City. The lift station is aged and unreliable; the proposed improvements are designed to increase reliability to accepted standards and reduce the currently significant risk of sanitary sewer overflows. Upgrades include the installation of a new wet well designed to convey a peak flow of 2,000 gallons per minute (gpm); an increase of approximately 730 gpm flow from the 30 percent design as a resultant component of the Preliminary Design Report prepared for the City of Live Oak P Street Lift Station Update and Modification Project. In the anticipation of an increase in population of nearly 40,000 Live Oak residents by the year 2045, a roughly 444 percent increase, the City acknowledges the 45-year-old lift station at the end of its life cannot provide the sufficient flow required by 2045. While the population of the City is projected to increase, the area contributing flow to the P Street Lift Station are mostly built out, so capacity requirements are expected to remain relatively stable. With only two lift stations in the City, the P Street Lift station has been designed to accommodate a reliable and redundant flow rate of 2,000 gpm, or 1.83 million gallons per day (MGD), which is sufficient flow in the case of the other lift station being out of commission.

The Project proposes to utilize the western half of the Site as a staging area for equipment. There are drainage swales which route from north and the east, flowing west. These swales converge at the northwest corner of the Site. The proposed route for equipment to work on the lift station would cross over an existing on-site drainage swale running north to south, approximately 25 feet due west of the existing facility's western-facing façade. Additionally, approximately 30 feet north of the existing facility's northern-facing façade is the same drainage swale's east to west running portion (the drainage swale in its entirely is L-shaped). Commencing from the northeast corner of the Site, the drainage swale runs due west along the Site's northern boundary, then heads due south prior to terminating at the Project Site's southern boundary. Both end points of the drainage swale contain 12-inch culvert piping running through P Street east of the Site, and Date Street south of the Site. In order to ensure safe crossings over the north-to-south portion of the existing drainage swale, the Project proposes to fill the swale (both portions) with a new box culvert and infill soil to the American Association of State Highway and

Transportation Officials (AASHTO) HS-20 design standards to allow for more than 2-axle vehicles to traverse the swales without destroying the piping laid at the bottom of each swale portion. As an option to undergrounding the swale, the Project proposes to provide temporary plates, or other means to bridge the drainage swale, that would not require bypass pumping or construction during summer months. However, it is yet to be determined if these plates will be able to support the heavy equipment needed to move and remove excavation material generated during the wet well excavation. Therefore, the preferred Project would include installing a new conveyance system within the swales. The biological and cultural components related to the environmental impacts associate with the infilling of this drainage swale are analyzed in this IS.

Major facility improvements include the construction and installation of a new confined wet well at 25.5 feet depth; a new valve vault including penetrations for three 8-inch discharge pipes from pumps in the wet well; the replacement of existing flow meter/flow routing vault, drainage channel, pump house roof, and generator foundation; installation of an optional odor control system foundation; a CMU perimeter wall constructed around the facility, install an irrigation system around the facility, and base/pave the interior of the Site.

2.2 Employees and Construction

On average, there will be approximately 10 employees at the Project site while construction activities are occurring. Construction is anticipated to start in May of 2024 and take approximately 250 days to complete.

The most significant excavation activities will be for the new wet well. The excavation is expected to be reinforced with sheet piles[1] with approximate dimensions of 20 feet wide by 20 feet long by 28 feet deep A concrete precast wet well will be placed in the excavation with new pumps installed to accommodate future population demands of the City.

In all trenches, the pipe will be bed with crushed rock and the trench backfilled with excavated existing native soils. Where the final surface is to be paved, an aggregate base (AB) sublayer will be installed with a finished surface of asphalt concrete (AC), except where sidewalks are present and Portland cement concrete will be the finished surface.

Approximately 600 cubic yards (cy) of soil will be excavated during the construction phase of the Proposed Project. Approximately 200 cy of soil will be exported from the Site; the remaining soil would be used to fill excavations including trenches and existing structures proposed for abandonment (most of the excavated material will be reused in the backfill of the trenches). Approximately 50 cy of import soil will be required to complete the Project. This includes export of excavation material from the wet well excavation,

[1] Sheet Pile - The sheet pile serves as a temporary supporting wall that has been driven in a slope or ditch to support soft soil slides from high ground to low ground. Common types of sheet piles include casting reinforced concrete panel sheets with tongue and groove, aluminum, vinyl or polymeric compounds, timber, or steel.

pipe zone and roadway material in the trench zone, and the import of new AB, AC, and pipe bedding material.

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 Live Oak is the lead agency for the Proposed Project. In order to approve the Project, the Live Oak City Council (Council) must first adopt the Initial Study/Mitigated Negative declaration (IS/MND), approve the Project, and file a Notice of Determination within five working days. The Council will consider the information contained in the IS/MND in making its decision to approve or deny the Project. The IS/MND is intended to disclose to the public the 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 include the following:

Feather River Air Quality Management District (FRAQMD)

The Proposed Project is located in an area under the jurisdiction of the Feather River AQMD. The Project applicant may be required to obtain the district'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 Live Oak 2030 General Plan

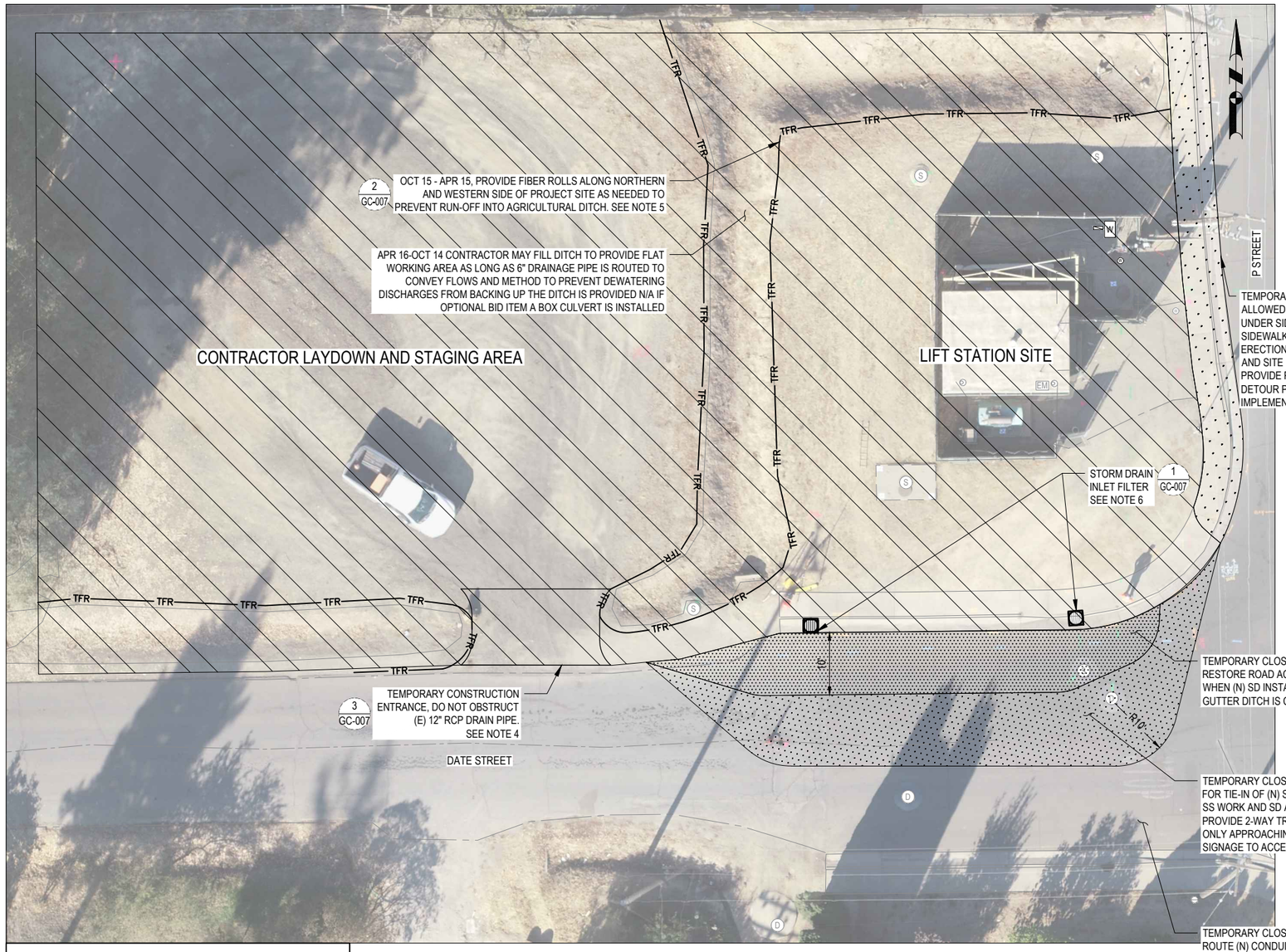
The City of Live Oak 2030 General Plan is the primary document governing land use development in the city. The General Plan provides a governing basis for all other plans and planning documents of the City and all codes, ordinances, and policies of the City related to land use change, transportation, environmental resources, infrastructure, and other related topics. The General Plan consists of the following elements:

- Land Use;
- Circulation;
- Community Character;
- Conservation and Open Space;
- Economic Development;
- Public Utilities, Services and Facilities;
- Housing;
- Noise;
- Parks and Recreation; and
- Public Safety.

Each element also has goals, policies, and implementation strategies to guide land use and development decisions in the future.

2.5 Consultation with California Native American Tribe(s)

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. On December 14, 2022, the City sent notification letters to the following Native American tribes: the Ione Band of Miwok Indians, the Torres Martinez Desert Cahuilla Indians, and the United Auburn Indian Community of the Auburn Rancheria. At the time of publication of the IS/MND, the city had not received any responses from the tribes. Further information on potential Tribal Cultural Resources in the Project area is provided in Section 4.18 of this Initial Study.

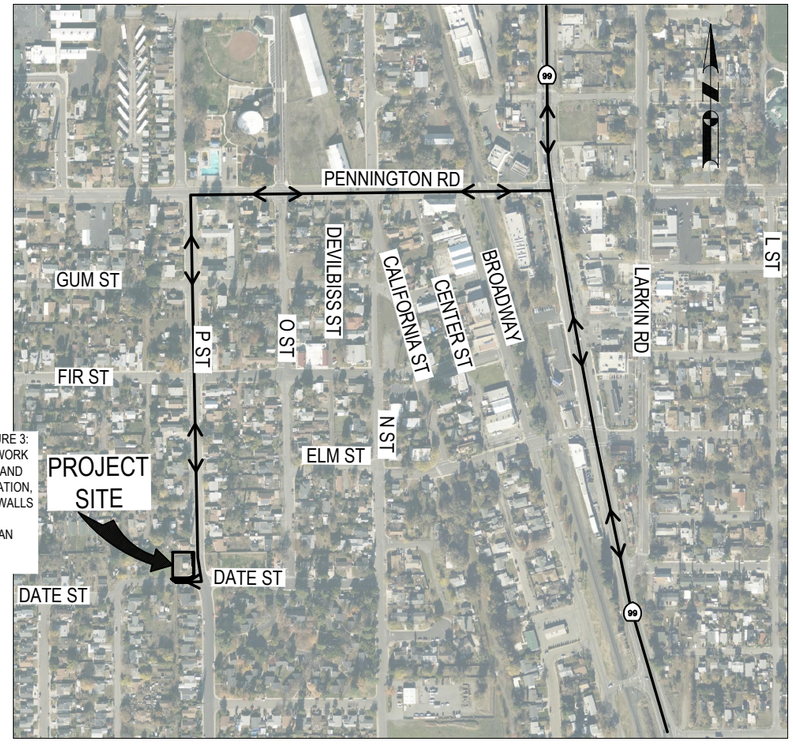


TEMPORARY EROSION CONTROL - LEGEND

- STORM DRAIN INLET FILTER, DETAIL 1, SHEET GC-007
- TFR — SEDIMENT FIBER ROLL, DETAIL 2, SHEET GC-007

1 EXISTING SITE & CONTRACTOR STAGING

1" = 10'



ACCESS ROUTE - FROM SOUTHBOUND SR-99:
1. LEFT ON PENNINGTON ROAD
2. LEFT ON P STREET
3. RIGHT ON DATE STREET

ACCESS ROUTE - FROM NORTHBOUND SR-99:
1. RIGHT ON PENNINGTON ROAD
2. LEFT ON P STREET
3. RIGHT ON DATE STREET

2 SITE ACCESS ROUTE

NTS

SHEET NOTES:

1. CONTRACTOR TO PROVIDE FULL SITE ACCESS CONTROL FOR DURATION OF CONSTRUCTION.
2. SITE ACCESS SHALL BE LIMITED TO THE ROUTES INDICATED. ACCESS VIA BROADWAY, APRICOT, LARKIN OR DATE STREETS IS STRICTLY FORBIDDEN.
3. EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED BY THE CONTRACTOR TO CONTROL RUN-OFF AND SEDIMENT FROM THE SITE. AT A MINIMUM, THOSE ITEMS SHOWN SHALL BE INCLUDED. ADDITIONAL MEASURE MAY BE REQUIRED FOR CONTRACTOR TO MAINTAIN RUN-OFF CONTROL. BMPs SHALL BE MODIFIED TO SUIT SITE AND SEASON AS REQUIRED.
4. KEEP THE STREET OUTSIDE OF THE CONSTRUCTION SITE CLEAN BY ESTABLISHING STABILIZED CONSTRUCTION ENTRANCES. RESTRICT ALL TRAFFIC TO THE SITE ENTRANCE. IF AN EXISTING DRIVEWAY WILL BE USED, SWEEP AND PICK UP DIRT AND DEBRIS FROM THE DRIVEWAY AT THE END OF CONSTRUCTION EACH DAY. DO NOT SWEEP INTO THE STREET OR DRAINAGE SYSTEM. FOR SITE WITHOUT EXISTING DRIVEWAY. INSTALL A TEMPORARY STABILIZED CONSTRUCTION SITE ACCESS ENTRANCE PER DETAIL 3, SHEET GC-007.
5. PROTECT SLOPES, DITCHES, PROPERTIES, AND WATERWAYS DOWNSTREAM OF THE CONSTRUCTION SITE FROM EROSION.
6. PROTECT ALL STORM DRAIN INLETS AND CATCH BASINS IN THE ROAD NEAR THE SITE DURING CONSTRUCTION. PREVENT RUNOFF FROM THE SITE FROM ENTERING THE INLETS WITHOUT FIRST BEING FILTERED TO REMOVE SEDIMENT.

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

BID SET

REGISTERED PROFESSIONAL ENGINEER — WILLIAM D. WORRALL — NO. 62870 — CIVIL — STATE OF CALIFORNIA
EXP. 06/30/2024

NO.	DESCRIPTION	DATE	APPR.

DESIGN BY	BDW
DRAWN BY	PX
CHECK BY	BDW
HORIZONTAL DATUM	CCS83, ZONE 2
VERTICAL DATUM	NAVD88

DRAWING SCALE: AS SHOWN
ORIGINAL DRAWING SCALE: 0 ½" 1"

LIVE OAK

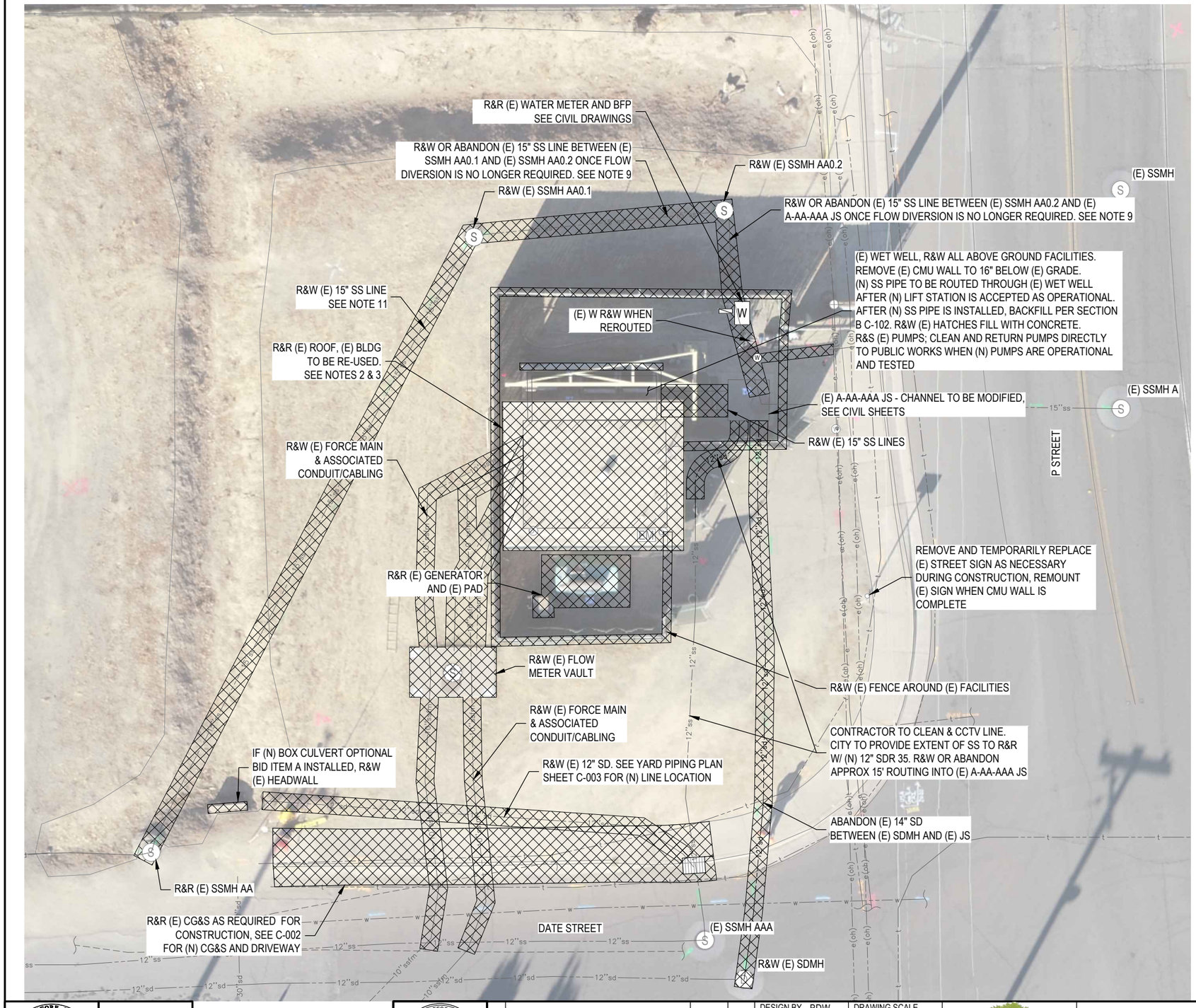
KSN inc. KJELDSEN SINNOCK NEUDECK
CIVIL ENGINEERS & LAND SURVEYORS
www.ksninc.com
711 N. Pershing Avenue
Stockton, CA 95203
209-946-0268
1550 Harbor Blvd., Suite 210
West Sacramento, CA 95691
916-403-5900

"P" STREET LIFT STATION
UPDATE AND MODIFICATION
CITY OF LIVE OAK

EXISTING SITE, STAGING, ACCESS PLAN & BMPs

DATE	MAY 2022
SHEET IDENTIFICATION	C-001
SHEET	25 OF 72
KSN PROJECT FILE NO.	2449-0010

FILE SPEC: N:\cs_projects\KSN\21\21054-liveoakpstreet\7-workingfolder\Sheets\C-001_EXISTING SITE, STAGING & ACCESS PLAN.dwg
PLOT DATE: May 23, 2022 - 12:24pm



SHEET NOTES:

1. BYPASS PUMPING OR FLOW REROUTING IS REQUIRED TO EXECUTE MUCH OF THE WORK AND SHALL BE COORDINATED WITH THE DEMOLITION SEQUENCING. CONTRACTOR MUST MAINTAIN BYPASS PUMPING OPERATION FOR DURATION OF CONSTRUCTION UNTIL TIE-IN AND COMMISSIONING OF NEW FACILITIES IS COMPLETE. REFER TO SPECIFICATIONS 01500 FOR FURTHER REQUIREMENTS.
2. THE DRY PIT BENEATH THE ELECTRICAL CONTROLS BUILDING MUST BE ACCESSED TO ROUTE FLOWS DURING DEMOLITION & RECONSTRUCTION. HAZARDOUS ATMOSPHERE ENTRY PROCEDURES REQ'D. ONCE THE (N) WET WELL IS COMMISSIONED AND THE FLOW DIVERSION IS NO LONGER REQUIRED, CONTRACTOR SHALL SEAL OFF THE ENTRANCE TO THE DRY PIT - SEE STRUCTURAL DWGS. CONTRACTOR HAS OPTION TO SALVAGE ANY MATERIALS FROM THE DRY PIT FOR ITS OWN PURPOSES.
3. THE EXISTING ELECTRICAL CONTROLS BUILDING ROOF IS TO BE DEMOLISHED AND REPLACED. CONTRACTOR MAY USE VERTICAL ACCESS CREATED BY REMOVAL FOR ELECTRICAL AND CONTROLS INSTALL BUT SHALL PROTECT ALL EQUIPMENT.
4. CONTRACTOR SHALL PROVIDE SHEETING/SHORING AS NECESSARY TO MAINTAIN EXISTING FACILITIES.
5. UNLESS NOTED OTHERWISE ALL PIPING WITHIN THE PROJECT SITE THAT IS NOT USED FOR UPDATED STATION BUT OUTSIDE OF THE LIMITS OF NEW STRUCTURES TO BE R&W. GRAVITY PIPES SPECIFICALLY CALLED OUT AS "R&W OR ABANDON" MAY BE PLUGGED WITH CDF/GROUT.
6. IF ASBESTOS CEMENT PIPES (ACP) ARE ENCOUNTERED THE CONTRACTOR SHALL HALT WORK AND THE CITY AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
7. EXISTING ELEVATIONS AND DIMENSIONS ARE APPROXIMATE. CONTRACTOR SHALL CONFIRM PRIOR TO COMMENCING ANY DEMOLITION WORK.
8. ALL EXISTING FACILITIES, PIPELINES, AND STRUCTURES NOT INDICATED IN SCOPE OF DEMOLITION DRAWINGS THAT ARE DAMAGED AND/OR REMOVED SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
9. PIPING BETWEEN MH AA0.1 AND (E) A-AA-AAA JS TO REMAIN IN PLACE UNTIL NEW WET WELL IS IN PLACE AND FLOW DIVERSION IS NO LONGER REQUIRED UNLESS ALTERNATIVE FLOW REROUTING/BYPASS PUMPING PLAN APPROVED.
10. TEMPORARY SS PIPING TO BE INSTALLED FOR FLOW BYPASS/ REROUTING (NOT SHOWN) MAY BE ABANDONED WITH CDF/GROUT.
11. EXISTING PIPING BETWEEN SSMH AA AND SSMH AA0.1, AND OUTSIDE OF THE LIMITS OF EXCAVATION FOR THE (N) WET WELL MAY BE ABANDONED IN PLACE BY FILLING WITH CDF/GROUT.
12. FOR PIPE PENETRATIONS INTO EXISTING DRY PIT OR WET WELL REMOVE PIPE TO NEAREST CONNECTION AND GROUT PENETRATION.

NOT SHOWN - R&R (E) CG&S TO INSTALL (N) ELEC CONDUIT ON N&S SIDES OF DATE STREET FOR (N) PG&E ELEC SERVICE. SEE ELEC DWGS. CONTRACTOR MAY LEAVE CG&S IN PLACE IF INSTALLED WITH METHODS THAT DO NOT DAMAGE.

FILE SPEC: N:\cs_projects\KSN\21\21054-liveoakpstreet\7-workingfolder\Sheets\CD101_SITE DEMOLITION PLAN.dwg
PLOT DATE: May 23, 2022 - 12:24pm

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BID SET

REGISTERED PROFESSIONAL ENGINEER WILLIAM D. WORRALL NO. 62870 CIVIL STATE OF CALIFORNIA EXP. 06/30/2024

NO.	DESCRIPTION	DATE	APPR.

DESIGN BY	BDW
DRAWN BY	PX
CHECK BY	BDW
HORIZONTAL DATUM	CCS83, ZONE 2
VERTICAL DATUM	NAVD88

DRAWING SCALE: 1" = 6'
ORIGINAL DRAWING SCALE: 0 ½" 1"

LIVE OAK

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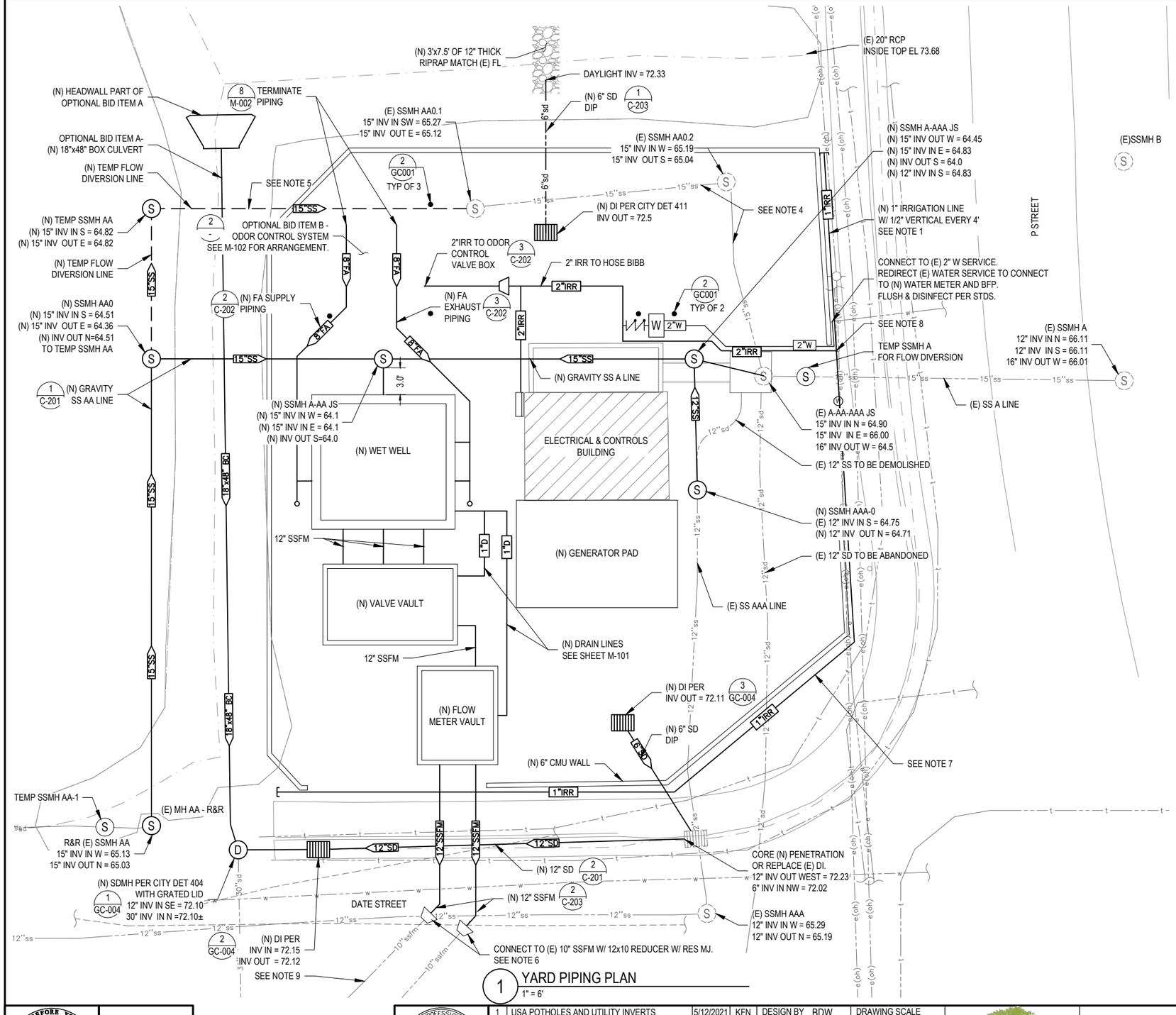
West Sacramento, CA 95691
916-403-5900

"P" STREET LIFT STATION
UPDATE AND MODIFICATION
CITY OF LIVE OAK

SITE DEMOLITION PLAN

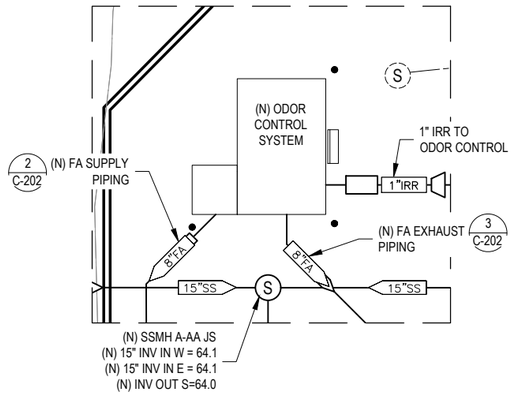
DATE: MAY 2022
SHEET IDENTIFICATION: CD-101
SHEET 15 OF 72
KSN PROJECT FILE NO. 2449-0010



1 YARD PIPING PLAN
1" = 6'

NOTES:

1. UTILITY NOTES AND MEASUREMENTS SHOWN ARE BASED ON INFORMATION PROVIDED IN THE FIELD BY OTHERS.
2. KSN SURVEYED USA MARKINGS AND POTHOLE LOCATIONS ON APRIL 13, 2021.
3. UNDERGROUND UTILITIES WERE LOCATED BY GROUND PENETRATING RADAR (GPR) DURING SUBTRONIC'S UTILITY LOCATING. UTILITIES NOT SPECIFICALLY LABELED ARE THOUGHT TO BE ABANDONED AS THEY HAVE NOT BEEN IDENTIFIED DURING USA BY UTILITY COMPANIES, NOR WHEN UTILITY LETTER WERE SENT. CONTRACTOR TO VERIFY. UTILITIES SHOWN AS LOCATED BY GPR IS APPROXIMATE.
4. PIPING BETWEEN MH AA0.2 AND (E) A-AA-AAA JS TO REMAIN IN PLACE UNTIL NEW WET WELL IS IN PLACE AND FLOW DIVERSION IS NO LONGER REQUIRED.
5. PIPING BETWEEN MH A0 AND MH AA0.1 IS TEMPORARY FOR USE DURING FLOW DIVERSION. TO BE GROUTED OR REMOVED WHEN NO LONGER NEEDED FOR FLOW DIVERSION. REMOVE TEMPORARY MH WHEN NO LONGER NEEDED.
6. CONTRACTOR TO POTHOLE & CONFIRM PIPE TYPE & SIZE PRIOR TO ORDERING FITTINGS.
7. IRRIGATION SUPPLY PIPING TO BE INSTALLED WITH 6" CLEARANCE FROM FACE OF PERIMETER WALL. INSTALL AT 6" BELOW GRADE.
8. 2" W IN TO SITE AND 1" IRR TO LANDSCAPE AREA CAN BE IN SAME TRENCH TO AVOID WALL FOOTING.
9. LINE STOPS TO BE INSTALLED. SEE FLOW DIVERSION PLANS.



2 - OPTIONAL BID ITEM B - ODOR CONTROL SYSTEM
1" = 6'

FILE SPEC: N:\cs_projects\KSN\21\21054-liveoakpstreet\7-workingfolder\Sheets\C-003_YARD PIPING PLAN.dwg
PLOT DATE: May 23, 2022 - 12:25pm

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BID SET

REGISTERED PROFESSIONAL ENGINEER WILLIAM D. WORRALL NO. 62870 CIVIL STATE OF CALIFORNIA
EXP. 06/30/2024

NO.	DESCRIPTION	DATE	APPR.
1	USA POTHOLES AND UTILITY INVERTS	5/12/2021	KFN

DESIGN BY BDW
DRAWN BY PX
CHECK BY BDW
HORIZONTAL DATUM CCS83, ZONE 2
VERTICAL DATUM NAVD88
DRAWING SCALE AS NOTED
ORIGINAL DRAWING SCALE 0 ½" 1"

LIVE OAK

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"P" STREET LIFT STATION
UPDATE AND MODIFICATION
CITY OF LIVE OAK

YARD PIPING PLAN

DATE MAY 2022
SHEET IDENTIFICATION C-003
SHEET 27 OF 72
KSN PROJECT FILE NO. 2449-0010

3 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

3.1.1.1 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. ☐

Aaron D Palmer — 12-20-22

Aaron Palmer
City Manager

Date

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4 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Live Oak is located in the northeastern portion of Sutter County within the Sacramento Valley. The city is situated between the Sutter Buttes to the west, and the Feather River to the east, the Butte-Sutter County boundary to the north, and unincorporated areas of Sutter County to the south. Highway 99 bisects the city into western and eastern portions. In addition to Highway 99, Live Oak is also bisected by the Union Pacific railroad line, which is located just west of the highway (City of Live Oak 2010a). According to the U.S. Census Cartographic Boundary Files, Live Oak is a small city of approximately 1,997.43 acres or 3.1 square miles (U.S. Census 2018). The land in the city is predominately flat ranging in elevation from approximately 70 to 85 feet above mean sea level (AMSL).

The 2030 General Plan Conservation and Open Space Element identifies farmland surrounding the city and the Sutter Buttes as scenic open space areas, which views of each should be protected (City of Live Oak 2010a).

4.1.1.1 Visual Character of the Project Site

The Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. The topography of the Project Site is relatively flat, with elevations ranging from 72 to 75 feet AMSL. Visual character of the Site varies consists of an existing lift station structure in the southeastern corner (APN 006-241-001) and an "L" shaped drainage ditch commencing in the northeastern corner of the Site, running east to west, and intersecting a north/south portion of the ditch that is approximately 25 ft west of the lift station structure. As the Project would involve the abandonment and partial replacement of existing underground wastewater and storm drain pipelines within the street ROW and sewer easement areas, the reconnection of a storm drain pipeline, and improvements to the City's P Street Lift Station (a new backup generator, new pump, and other electrical equipment), the Project would have no effect on the visual character of Live Oak.

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. No officially designated or eligible scenic highways are in or near the City of Live Oak (Caltrans 2022).

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:[2]

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

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

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 foot-candle 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 particles in the atmosphere. 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 Live Oak 2030 General Plan does not identify any scenic vistas nor provide any policies for the protection of scenic vistas. The Project would not block views of any scenic vistas. Additionally, all Project related improvements, with exception of the CMU wall, would occur under ground or within existing facilities. 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 not located within the vicinity of an officially designated scenic highway. 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 includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. With the exception of the CMU security wall around the lift station, all Project improvements would be completed underground or at ground surface. Upon completion of the Project, the only visual indication that this improvement has been done would be the new security wall and new asphalt strips on the city streets.

The Project proposes a landscape-ready area along the P Street and Date Street portion of the Project boundary, between the sidewalk and CMU security wall surrounding the lift station facilities. This proposed landscape area will satisfy the City's Policy DESIGN-14.3 which encourages the use of site landscaping that uses appropriate native plant materials in order to enhance the natural character of the region; to reduce water and pesticide use; and to provide habitat for native species. These improvements would not conflict with applicable zoning and other regulations governing scenic quality in the City of Live Oak. 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 includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. 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 including 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 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 (DOC 2022a).

This site is not identified as being under a Williamson Act contract as it is within an urban area. No farming activities exist in the site as the Project area is located within the Live Oak urban-built areas.

The Project Site is within the City of Live Oak 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. Because the Project involves the replacement of underground wastewater facilities, reconnection of existing drainage facility and minor improvements to the Lift Station, 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 Live Oak 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.

No identified forest lands exist 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 by DOC. the Project is the replacement of existing wastewater infrastructure and would not extend to those areas under existing agricultural use. No forest land exists 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

This assessment was prepared using methods and assumptions recommended in the rules and regulations of the Feather River Air Quality Management District (FRAQMD). Regional and local existing conditions are presented, along with pertinent pollutant emissions standards and regulations. The purpose of this assessment is to estimate criteria air pollutants attributable to the Project and determine the level of impact the Project would have on the environment.

4.3.1 Environmental Setting

The Project Site is located within Sutter County in the City of Live Oak. 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 Northern Sacramento Valley Air Basin (NSVAB), which includes the counties of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba. 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. Because the valley is a bowl-like shape, this can trap pollutants and a temperature inversion layer can create unhealthy pollution concentrations.

Both the U.S. Environmental Protection Agency (USEPA) and CARB have established ambient air quality standards for common pollutants. These ambient air quality standards establish safe levels of contaminants 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 air quality regulating authority in Sutter County is FRAQMD. 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 Sutter and Yuba Counties, within the NSVAB. The unique mountain-encompassed geography with its potential for trapped pollutants underscores the importance of the FRAQMD regulating air pollution. Sutter County is classified as an attainment area for all federal standards. However, Sutter County is designated as a non-attainment area for the state standards of O_3 and PM_{10} (particulate matter less than 10 microns in diameter) (CARB 2019). The FRAQMD is responsible for adopting or creating a comprehensive plan to reduce the emissions of these criteria pollutants. They also enforce rules and regulations, inspect and issue permits for stationary sources of air pollutants, respond to citizen complaints, monitor ambient air quality and meteorological conditions, award grants to reduce motor vehicle emissions, and conduct public education campaigns. The FRAQMD coordinates work from government agencies, businesses, and private citizens to achieve and maintain healthy air quality.

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 (CCAA) 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 Sutter County portion of the NSVAB, which is under the jurisdiction of the FRAQMD. The FRAQMD is required, pursuant to the CCAA, to reduce emissions of criteria pollutants for which the NSVAB in nonattainment. The FRAQMD attains and maintains air quality conditions in Sutter County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. Their current strategies are included in the *Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan* (2021), which contains mechanisms to achieve O_3 standards. These pollutant control

strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region. FRAQMD's latest population growth forecasts were defined in consultation with local governments and with reference to local general plans. A project conforms with the FRAQMD attainment plans if it complies with all applicable district rules and regulations, complies with all control measures from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan).

FRAQMD growth projections for the City of Live Oak are based on the City of Live Oak General Plan. As such, projects that propose development consistent with the growth anticipated by the respective general plan of the jurisdiction in which the project is located would be consistent with FRAQMD air quality planning. If a project, however, proposes a project that increases the population density than that assumed in the general plan, the project may conflict with FRAQMD air quality planning efforts and could result in a significant impact on air quality. The Project is proposing upgrades to a lift station and pipeline replacements. It would not increase the number of homes or jobs and would not contribute to emissions once the construction of the upgrades is complete. Additionally, to comply with all applicable FRAQMD rules and regulations, the Proposed Project would also have to adhere to the daily and annual thresholds for individual pollutants. As demonstrated in Table 4.3-1, the Proposed Project construction phase would not surpass any of the FRAQMD's significance thresholds. The Project would not conflict with the *Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan*. There is no impact.

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 with mitigation incorporated.

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 excavation. 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-generated emissions associated with 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 infrastructure projects involving pipelines, underground facilities, and linear facilities. Appendix A provides more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted daily and maximum emissions attributable to Project construction are summarized in Table 4.3-1. 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 FRAQMD's thresholds of significance.

Table 4.3-1. Construction-Related Emissions

Activity	ROG[1]	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Daily (pounds per day)						
Grubbing/Land Clearing	0.73	8.06	6.81	0.02	2.86	0.81
Grading/Excavation	3.80	38.69	26.80	0.09	4.11	1.96
Drainage/Utilities/Sub-grade	3.47	34.61	33.74	0.08	3.90	1.79
Paving	1.20	12.62	16.83	0.03	0.63	0.54
Maximum Emissions	**3.80**	**38.69**	**33.74**	**0.09**	**4.11**	**1.96**
FRAQMD Daily Significance Threshold	*25*	*25*	-	-	*80*	-
Exceed FRAQMD Daily Threshold?	**No**	**Yes**	**No**	**No**	**No**	**No**
Annual (tons per year)						
Total Construction Period	0.4	3.8	3.7	0.0	0.4	0.2
FRAQMD Annual Significance Threshold	*4.5*	*4.5*	-	-	-	-
Exceed FRAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: RCEM version 9.0.0. Refer to Appendix A for Model Data Outputs.

Notes: ROG = Reactive organic gases. $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter. NO_x and ROG construction emissions may be averaged over the life of a project but may not exceed 4.5 tons per year.

Emission calculations account for the export of 200 cubic yards of soil material daily during the Grading/Excavation phase and import of 50 cubic yards of soil material daily during the Drainage/Utilities/Subgrade phase, as provided by the Project proponent.

As shown in Table 4.3-1, Project emissions would exceed the FRAQMD's NO_x significance thresholds during construction. Therefore, mitigation measure AQ-1 is required in order to reduce NO_x emissions to levels below the significance threshold. Mitigation measure AQ-1 would require the use of construction equipment with Tier 4 Certified engines during construction activities.

The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 horsepower and increasingly more stringent Tier 2, Tier 3, and Tier 4 standards for all equipment with phase-in schedules from 2000 to 2015. As a result, all off-road, diesel-fueled construction equipment manufactured from 2006 to 2015 has been manufactured to Tier 3 standards. The Tier 3 standards can reduce NO_x emissions by as much as 64 percent and PM emissions by as much as 39 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which are currently phased-in over the period of 2008-2015. The Tier 4 standards require that NO_x emissions be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later have been manufactured to Tier 4 standards.

Table 4.3-2 shows Project construction emissions with the imposition of mitigation measure AQ-1.

Table 4.3-2. Mitigated Construction-Related Emissions

Activity	ROG[1]	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Daily (pounds per day)						
Grubbing/Land Clearing	0.71	6.98	7.46	0.02	2.81	0.76
Grading/Excavation	2.99	18.16	44.64	0.09	3.32	1.23
Drainage/Utilities/Sub-grade	2.73	17.33	39.82	0.08	3.27	1.21
Paving	1.20	12.62	16.83	0.03	0.63	0.54
Maximum Emissions	**2.99**	**18.16**	**44.64**	**0.09**	**3.32**	**1.23**
FRAQMD Daily Significance Threshold	*25*	*25*	-	-	*80*	-
Exceed FRAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Annual (tons per year)						

Table 4.3-2. Mitigated Construction-Related Emissions						
Activity	**ROG[1]**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Total Construction Period	0.3	2.0	4.4	0.0	0.4	0.1
FRAQMD Annual Significance Threshold	*4.5*	*4.5*	-	-	-	-
Exceed FRAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: RCEM version 9.0.0. Refer to Appendix A for Model Data Outputs.
Notes: ROG = Reactive organic gases. $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter. NO_x and ROG construction emissions may be averaged over the life of a project but may not exceed 4.5 tons per year.
Emission calculations account for the export of 200 cubic yards of soil material daily during the Grading/Excavation phase and import of 50 cubic yards of soil material daily during the Drainage/Utilities/Subgrade phase, as provided by the Project proponent.

As shown in Table 4.3-2, implementation of mitigation measure AQ-1 would reduce NO_x emissions during construction activities to levels below the FRAQMD thresholds. 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 nonattainment under an applicable federal or state ambient air quality standard, and no health effects from Project criteria pollutants would occur. This impact is less than significant with mitigation incorporated.

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 P Street Lift Station. Once upgrades are complete, the Project would not be a greater source of operational emissions beyond current conditions. Therefore, Proposed Project operations would not contribute to on- or offsite emissions.

USEPA Conformity Determination Analysis

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 Clean Air Act (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 CFR § 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 or Federal Transit Administration (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 non-attainment area exceeds the de minimis limits for the region, the lead federal agency is required to make a conformity determination. As previously described, the Project Site is located in the Sutter County portion of the NSVAB. The Federal General Conformity *De Minimis* Emissions thresholds in Sutter County, as established by the USEPA, are based on the NAAQS designation and classification of Sutter County. As previously described, Sutter County is classified as an attainment area for all federal standards. Thus, the *De Minimis* Emissions thresholds in Sutter County are 100 tons/year of ROG, 100 tons/year of NOx, 100 tons/year of PM_{10}, 100 tons/year of $PM_{2.5}$, and 100 tons/year of SO_2 (USEPA 2020). As shown in Table 4.3-1, emissions from implementation of the Proposed Project do not exceed the USEPA Conformity Determination thresholds for the region.

As demonstrated above, the Proposed Project would not exceed either the FRAQMD significance thresholds or the USEPA Conformity Determination thresholds during construction and would not be a source of emissions once construction is completed. Therefore, this impact is less than significant.

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 nearest sensitive receptors to the Project Site are single-family residences located adjacent to the northern and western boundaries of the Project Site. There are also single-family residences located to the south of the Project Site across Date Street and to the east of the Project Site across P Street.

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 Sutter County portion of the NSVAB is listed as non-attainment for the California standards of O_3 and PM_{10} (CARB 2019). Thus, existing O_3 and PM_{10} are at unhealthy levels during certain periods.

The health effects associated with O_3 are generally associated with reduced lung function. The Project would not involve construction activities that would result in high levels of O_3 precursor emissions (ROG or NOx) in excess of the FRAQMD 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 that would pose a health risk to the nearby residences. The exposure from construction would be temporary and due air flow within the area, would not result in a concentrated exposure to CO. 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} that would exceed the FRAQMD'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.

The Project would not expose sensitive receptors to substantial pollutant concentrations. This impact is less than significant.

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 lift station would not emit odors.

4.3.3 Mitigation Measures

AQ-1: The Project applicant and/or its contractor shall require that all Project earth-moving equipment (excavators, used during construction activities shall be California Air Resources Board (CARB) Tier 4 Certified, as set forth in Section 2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 of the Code of Federal Regulations.

Timing/Implementation: During construction

Monitoring/Enforcement: The City of Live Oak 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. (2022a) on behalf of Kjeldsen, Sinnock & Neudeck, Inc. This document is included as Appendix B of this Initial Study.

4.4.1 Environmental Setting

The Study Area is located in the northwestern quadrant of the P Street and Date Street intersection in Live Oak, California. The approximate center of the Study Area is located within the Honcut Headwater-Lower Feather Watershed (ECORP 2022a).

The existing lift station facility occupies the southeastern corner of the Study Area. The undeveloped portion of the Study Area appears to have been leveled and historically disturbed as evidenced by gravel

and remnant asphalt surfaces. Several mature trees, including valley oak (*Quercus lobata*) and blue gum (*Eucalyptus globulus*), are located at the western boundary bordering a residence. The surrounding lands include residential development to the north, south and west, and the Date Street Park to the east

Representative photographs of the Study Area are included in Appendix B.

Site Vegetation

The undeveloped portion of the Study Area has been highly disturbed with patches of gravel and remnant asphalt. The plants found in this area are common weedy species that are typically found on disturbed sites, including filaree (*Erodium botrys*), prickly lettuce (*Lactuca serriola*), chicory (*Cichorium intybus*), panicled willow-herb (*Epilobium brachycarpum*), and cheeseweed (*Malva parviflora*). The row of trees along the western boundary includes blue gum, a valley oak, and unidentified nonnative shrubs. This disturbed vegetation community is not characterized in *A Manual of California Vegetation*.

Four sensitive natural communities were identified in the literature review as occurring in the vicinity of the Study Area (ECORP 2022a), including Northern Hardpan Vernal Pool, Great Valley Cottonwood Riparian Forest, Great Valley Mixed Riparian Forest, and Great Valley Valley Oak Riparian Forest. None of these or any other sensitive naturals communities were found onsite.

Wildlife Observations, Movement Corridors, and Nursery Sites

The Study Area is located in a residential development and lacks any significant wildlife habitat elements, such as aquatic habitat, emergent wetlands, or woodlands. The Study Area is not located within an area mapped in the Essential Habitat Connectivity Project (ECORP 2022a). Wildlife observed during the reconnaissance site visit included Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), California scrub-jay (*Aphelocoma californica*), ruby-crowned kinglet (*Corthylio calendula*), cedar waxwing (*Bombycilla cedrorum*), and yellow-rumped warbler (*Setophaga coronata*). While there is minimal wildlife use onsite due to the developed setting, the trees located along the western boundary support potential nesting habitat for a variety of birds including special-status birds, and potential roosting habitat for bats. No California ground squirrels (*Otospermophilus beecheyi*) or their burrows, including burrow surrogates (e.g., debris piles, pipes, or culverts), or other small mammal burrows were found onsite.

Aquatic Features

A preliminary aquatic resources assessment was performed to identify potential Waters of the U.S./State concurrent with the BRA site visit. There are no aquatic resources present within the Study Area. The entire Study Area has been leveled and disturbed. A stormwater ditch has been excavated through the Study Area. This feature did not have ordinary high water mark field indicators or the three parameters necessary to be defined as a wetland. According to the National Wetlands Inventory, no aquatic resources have been previously mapped onsite.

Sensitive Natural Communities

Four sensitive natural communities were identified in the literature review as occurring in the vicinity of the Study Area (ECORP 2022a), including Northern Hardpan Vernal Pool, Great Valley Cottonwood Riparian Forest, Great Valley Mixed Riparian Forest, and Great Valley Oak Riparian Forest. None of these or

any other sensitive naturals communities were found onsite. No further discussion of sensitive natural communities is provided within this assessment.

4.4.2 Evaluation of Special-Status Species

Table 4.4-1 lists all the special-status plant and animal species (as defined above) identified in the literature review. Included in this table is the listing status for each species, a brief habitat description, and a determination on the potential to occur within the Study Area. Following the table is a brief description and discussion of each special-status species that is known to occur in the Study Area (from the literature review) or is considered to potentially occur within the Study Area.

Table 4.4-1. Potentially Occurring Special-Status Species						
Common Name ***Scientific Name***	**Status**			**Habitat**	**Survey/ Active Period**	**Potential for Occurrence**
	FESA	**CESA/ NPPA**	**Other**			
Birds						
White-tailed kite (Elanus leucurus)	-	-	CFP	Nests in trees in riparian, oak woodland, savannah, and agricultural communities near foraging habitat such as grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 2020).	March-August (nesting)	Low Potential. No documented CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a); however, trees along the western boundary represent marginal nesting 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 discing/ harvesting, and irrigated pastures.	March-August (nesting)	Low Potential. Five occurrences within 5 miles of the Study Area (ECORP 2022a). The larger trees along the western boundary of the Study Area represent marginal nesting habitat; there is no foraging habitat onsite.
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 (nesting)	Potential. No CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a); however, the trees along the western boundary represent potential nesting habitat.
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. Builds large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or croplands; also found in urban parklike settings.	April-June (nesting)	Potential. No CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a). However, the trees along the western boundary represent potential nesting habitat.
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 (nesting)	Potential. No CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a); however, the trees along the western boundary represent potential nesting habitat.
Bullock's oriole (Icterus bullockii)	-	-	BCC	Breeding habitat includes riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees (Flood et al. 2020).	March-July (nesting)	Potential. No CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a); however, the trees along the western

						boundary represent potential nesting habitat.
Mammals						
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 (Western Bat Working Group [WBWG] 2022). Forages in grasslands, oak savannahs, ponderosa pine forests, fruit orchards, and vineyards.	April-September (breeding)	Potential. No CNDDB occurrences within five miles of the Study Area (ECORP 2022a); however, the trees along the western boundary represent potential roosting habitat
Townsend's big-eared bat (Corynorhinus townsendii)	-	-	SSC	Habitats include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitats. Roosts in caves, mines, buildings, rock crevices, hollow trees. Forages in edge habitats along streams adjacent to and within wooded habitats.	April-September (breeding)	Low Potential. No CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a); however, the trees along the western boundary represent marginal roosting habitat.
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 sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2022).	April-September (breeding)	Potential. No CNDDB occurrences within 5 miles of the Study Area (ECORP 2022a); however, trees onsite represent potential roosting habitat.
Status Codes: BCC USFWS Bird of Conservation Concern (ECORP 2022a) CFP California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians) SSC CDFW Species of Special Concern						

Source: ECORP 2022a

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*.

4.4.2.1 Migratory Bird Treaty Act Protected Birds

The trees and the existing lift station facility within the Study Area support potential nesting habitat for a variety of common birds that, while not considered special-status as previously defined, are protected under the Migratory Bird Treaty Act (MBTA). Such species include California scrub-jay, northern mockingbird (*Mimus polyglottos*), and house finch (*Haemorhous mexicanus*).

4.4.3 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.

No special-status species are known to occur within the Study Area; however, no protocol-level field surveys have been conducted. Based on the field reconnaissance, the Study Area supports potential habitat for several special-status birds and mammals. Potential effects to special-status species are summarized in the following sections by taxonomic group or species.

Special-Status and Other Protected Birds

The trees along the western boundary of the Study Area represent marginal nesting habitat for one state-listed bird species (Swainson's hawk). These trees also provide marginal to suitable nesting habitat for five nonlisted special-status bird species and a variety of other nonlisted birds that are protected under the MBTA and the California Fish and Game Code. Project development could permanently remove or alter suitable nesting habitat for special-status and other protected birds. If Project construction occurs during the nesting season and active nests are present, they may be directly or indirectly impacted by development.

Implementation of mitigation measures BIO-1 and BIO-2 would reduce this potential impact to a less than significant level.

Special-Status Bats

The trees along the western boundary of the Study Area represent potential roosting habitat for three special-status bat species. Project development could permanently remove or alter suitable roosting

habitat for special-status bats, and if special-status bats occur onsite, they may be directly or indirectly impacted by development.

Implementation of mitigation measures BIO-1, BIO-3, and BIO-4 would avoid, minimize, and/or compensate for potential effects to special-status bats. Implementation of these measures would reduce this potential impact to a less than significant level.

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 supports disturbed weedy habitat. There are no sensitive natural communities as defined by CDFW, and there is no riparian habitat onsite. 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?	☐	☐	☐	☒

No impact.

Based on the preliminary aquatic resources assessment, there are no aquatic resources or potential waters of the U.S. or state present within the Study Area. 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)	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?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

The Study Area provides very limited migratory opportunities for terrestrial wildlife because of the developed nature of the surrounding lands and the absence of significant wildlife habitat elements onsite. Project construction is likely to temporarily disturb and displace some wildlife from the vicinity of the Study Area. Some wildlife such as birds or nocturnal species are likely to continue to use the habitats opportunistically for the duration of construction. Once construction is complete, wildlife movements are expected to resume but will likely be more limited due to the loss of open space within the Study Area. The Project is not expected to substantially interfere with wildlife movement. There are no documented nursery sites, and no nursery sites were observed within the Study Area during the site reconnaissance.

As stated previously, some wildlife such as birds or nocturnal species are likely to continue to use the habitats opportunistically for the duration of construction. With implementation of BIO-2, BIO-3, and BIO-4, 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) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐

Less than significant impact with mitigation incorporated.

The City does not have a tree preservation ordinance, but General Plan Policy Biological 2-1 authorizes the protection of native oak trees, and there is a valley oak tree present onsite. Project development could result in the direct or indirect impacts to protected oak trees. Implementation of mitigation measures BIO-1, BIO-5, and BIO-6 would avoid, minimize, and/or compensate for potential effects to protected oak trees. Implementation of these measures would reduce this potential impact to a less than significant level.

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 covered by any local, regional, or state conservation plan. Therefore, the Project would not conflict with a local, regional, or state conservation plan. There would be no impact.

4.4.4 Mitigation Measures

BIO-1: Worker Environmental Awareness Program. A qualified biologist should conduct a mandatory Worker Environmental Awareness Program for all contractors, work crews, and any onsite personnel to aid workers in recognizing special-status species and sensitive biological resources that may occur onsite. The program shall include identification of the special-status species and their habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and Mitigation Measures required to reduce impacts to biological resources within the work area.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-2: Nesting Bird Work Window. If construction is to be initiated during the nesting season (generally February 1 through August 31), conduct a preconstruction nesting bird survey of all suitable nesting habitat in and adjacent to the Project site within 14 days of the commencement of construction. The survey shall be conducted in accessible areas within a 500-foot radius of Project work areas for raptors and within a 100-foot radius for other nesting birds. 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 a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival or the nest is otherwise no longer occupied.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-3: Pre-construction Bat Roost Surveys. Bat roost surveys shall be conducted by a qualified wildlife biologist within 14 days prior to removal of any tree having the potential to provide bat roosting habitat. Locations of vegetation and tree removal or excavation will be examined for potential bat roosts. Specific survey methodologies will be determined by a qualified biologist and consistent with any applicable recommendations or requirements of CDFW, and may include visual surveys of bats (e.g., observation of bats during foraging period), inspection for suitable habitat or, observations of bat sign (e.g., guano), or use of ultrasonic detectors (e.g., SonoBat, Anabat). Removal of any significant roost sites located will be avoided to the extent feasible.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-4: Minimize disturbance to Bat Roosts. If it is determined that an active roost site cannot be avoided and will be affected, the biologist shall notify and consult with CDFW on appropriate bat exclusion methods and roost removal procedures.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-5: Pre-construction Protected Oak Trees Survey. A certified arborist shall conduct a survey to evaluate any trees proposed to be removed or disturbed.

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

Monitoring/Enforcement: *City of Live Oak*

BIO-6: Minimize disturbance to Protected Oak Trees. The applicant shall consult with the City to develop measures to preserve protected trees or mitigate their loss.

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

Monitoring/Enforcement: *City of Live Oak*

4.5 Cultural Resources

4.5.1 Cultural Resources Inventory and Evaluation Report

A Cultural Resources Inventory and Evaluation Report was prepared by ECORP Consulting (2022b) for the Proposed Project to identify potentially eligible cultural resources (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.

4.5.2 Regulatory Context

To meet the regulatory requirements of this Project, the cultural resources investigation was conducted pursuant to the provisions for the treatment of cultural resources contained within Section 106 of the National Historic Preservation Act (NHPA) and in CEQA PRC § 21000 et seq. The goal of NHPA and CEQA is to develop and maintain a high-quality environment that serves to identify the significant environmental effects of the actions of a proposed project and to either avoid or mitigate those significant effects where feasible. CEQA pertains to all proposed projects that require state or local government agency approval, including the enactment of zoning ordinances, the issuance of conditional use permits, and the approval of development project maps. The NHPA pertains to projects that entail some degree of federal funding or permit approval.

The NHPA and CEQA (Title 14, CCR, Article 5, § 15064.5) apply to cultural resources of the historical and pre-contact periods. Any project with an effect that may cause a substantial adverse change in the significance of a cultural resource, either directly or indirectly, is a project that may have a significant effect on the environment. As a result, such a project would require avoidance or mitigation of impacts to those affected resources. Significant cultural resources must meet at least one of four criteria that define eligibility for listing on either the California Register of Historic Resources (CRHR) (Public Resources Code (PRC) § 5024.1, Title 14 CCR, § 4852) or the National Register of Historic Places (NRHP) (36 CFR 60.4). Cultural resources eligible for listing on the NRHP are considered Historic Properties under 36 CFR Part 800 and are automatically eligible for the CRHR. Resources listed on or eligible for inclusion in the CRHR are considered Historical Resources under CEQA.

Tribal Cultural Resources are defined in Section 21074 of the California PRC as sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either included in or determined to be eligible for inclusion in the CRHR, or are included in a local register of historical resources as defined in subdivision (k) of § 5020.1, or are a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. Section 1(b)(4) of AB 52 established that only California Native American tribes, as defined in Section 21073 of the California PRC, are experts in the identification of Tribal Cultural Resources and impacts thereto. Because ECORP does not meet the definition of a California Native American tribe, this report only addresses information for which ECORP is qualified to identify and evaluate, and that which is needed to inform the cultural resources section of CEQA documents. This report, therefore, does not identify or evaluate Tribal Cultural Resources. Should California Native American tribes ascribe additional importance to or interpretation of archaeological resources described herein, or provide information about non-archeological Tribal Cultural Resources, that information is documented separately in the AB 52 tribal consultation record between the tribe(s) and lead agency and summarized in the Tribal Cultural Resources section of the CEQA document, if applicable.

This Project is being funded in part by federal money from the CWSRF. Because the CWSRF receives at least of a portion of funding from the federal government, such projects are required to comply with federal environmental regulations. The SWRQCB, which administers the CWSRF in California, has established standards to meet both state and federal requirements and is the responsible agency for Section 106 compliance. As such, this report was prepared in compliance with requisite federal standards.

4.5.2.1 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 §6250 et seq.) and California's open meeting laws (The Brown Act, Government Code § 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 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 Cultural Resources Inventory 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.

4.5.3 Environmental Setting

The Project Area is located in the southwest portion of the City of Live Oak, approximately 2 miles west of the Feather River and 5 miles northeast of the Sutter Butte Mountains. The Project Area is located in the Sacramento Valley, which creates the northern portion of California's Great Central Valley. The valley is characterized by nearly level alluvial plains that extend approximately 150 miles from the Klamath Mountains on the north to the confluence of the San Joaquin and Sacramento rivers on the south. The North Coast Ranges are to the west and the northern Sierra Nevada and southern Cascade ranges are to the east. The Feather River drains roughly 4,500 square miles along the eastern slopes of the northern Sierra Nevada and southern Cascade ranges.

The Project Area is near the center of the southern Sacramento Valley, in the greater Sacramento River Watershed. The area is primarily characterized by agricultural land, ruderal grassland, open space, and limited riparian vegetation. It is surrounded by rural agricultural lands and open space, with some rural residences to the west on the outskirts of the community of Live Oak. Elevations range from 75 to 100 feet above mean sea level.

According to the NRCS Web Soil Survey website (ECORP 2022b), there is one soil type within the Project Area: Conejo-Urban land complex (127), 0-percent slopes and prime farmland if irrigated. The parent material consists of loamy alluvium derived from igneous and metamorphic rock over dense alluvium derived from igneous and metamorphic rock. The loamy soil extends to 42 inches below surface.

The underlying geology of the Project Area consists of alluvium, lake playa, and terrace deposits that are of Pleistocene-Holocene age (ECORP 2022b). A moderate potential exists for buried pre-contact archaeological sites in the Project Area due to the presence of alluvium along the Feather River east of the Project Area and the likelihood of pre-contact archaeological sites located along perennial waterways.

Today, there is a mix of native and introduced species, mostly within the herbaceous understory of the Project Area, which includes such species as horsetails (*Equisetum* spp.), mugwort (*Artemisia douglasiania*), curly dock (*Rumex crispus*), and the invasive giant reed (*Arundo donax*). Forested and shrub wetlands occur along the Feather River, which is comparable to that of the non-wetland riparian areas, but the vegetation occurs in areas that are inundated or saturated with surface or groundwater to support vegetation adapted to such conditions (ECORP 2022b).

4.5.3.1 Area of Potential Affects

The 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 the NEPA and CEQA. This includes areas proposed for sewer line replacement, abandonment of existing storm drainage, curb,

gutter and street improvements, and possible box culvert and wing wall installation. It measures approximately 234 feet east-west and 115 feet north-south.

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 the Proposed Project includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project Site and includes excavations for the new sewer line, box culvert, and the CMU wall excavations. It could extend as deep as 12 feet below the current surface, and 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. The above-surface vertical APE for this Project is assumed to be approximately 20 feet, which represents the height of the lift station improvements.

4.5.3.2 Records Search

The records search consisted of a review of previous research and literature, records on file with the NEIC for previously recorded resources, historical aerial photographs, and maps of the vicinity.

Previous Research

Previous researchers have conducted 24 previous cultural resource investigations in or within 1 mile of the property, covering approximately 100 percent of the total area surrounding the property within the records search radius (Table 4.5-1). There was one study conducted within the Project Area and the other 23 were within the 1-mile radius. The previous studies were conducted between 1977 and 2018. These studies revealed the presence of historic sites associated with the Sacramento Railroad, Live Oak Commercial District, historic structures, Live Oak Cemetery, and Live Oak Wastewater Treatment Plant.

Table 4.5-1. Previous Cultural Studies in the Project Area

Report Number	Author(s)	Report Title	Year	Includes Portion of the Project Area?
8002 A, B	Sikes, Nancy E	Cultural Resources Inventory for the City of Live Oak General Plan Update, Sutter County, California; Volume II: Confidential Appendices; Revised Report	2006	Yes

The results of the records search indicate that all of the property has been previously surveyed for cultural resources; however, this study was conducted in 2006 and is now 16 years old. Given the time that has passed since the original survey, an updated survey under current protocols was necessary. The records

search also determined that seven previously recorded pre-contact and historic-era cultural resources are located within 1 mile of the Project Area (Table 4.5-2).

Table 4.5-2. Previously Recorded Cultural Resources within 1 mile of the Project Area

Site Number CA-SUT-	Primary Number P-51-	Recorder and Year	Age/ Period	Site Description	Within Project Area?
87H	87	1998 (Frank Deitz, US Army Corps of Engineers); 2019 (Ashleigh Sims, Environmental Science Associates)	Historic	Sacramento Northern Railway	No
-	123	1997 (Donald S. Napoli, [none]); 2005 (R. Herman, SWCA Environmental Consultants)	Historic	Live Oak Commercial District	No
-	125	2005 (Herrmann Cervantes, SWCA Environmental Consultants)	Historic	Live Oak Cemetery	No
128H	128	2005 Arrington, et al, SWCA Environmental Associates)	Historic	Bihlman House	No
-	151	2007 (Mark Beason & Shawn Riem, JRP Historical Consulting	Historic	Trees along Highway 99	No
-	249	2016 (Margo Nayyar, Michael Baker International)	Historic	Live Oak Wastewater Treatment Plant	No
-	253	2015 (Lori Harrington, Cultural Research Associates)	Historic	Historic Structure	No

Of these, none are believed to be associated with Native American occupation of the vicinity, and seven are historic-era sites and include the Sacramento Railroad, Historic Live Oak Commercial District, Live Oak Cemetery, and Live Oak Wastewater Treatment Plant. There are no previously recorded cultural resources within or adjacent to the Project Area.

Map Review and Aerial Photographs

The review of historical aerial photographs and maps of the Project Area provide information on the past land uses of the property and potential for buried archaeological sites. This information shows the property was initially vacant. Following is a summary of the review of historical maps and photographs.

- The 1868 BLM GLO Plat Map for Township 13 North Range 3 East depicts the Project Area as part of Boga Rancho. The Feather River flows southeast of the Project Area.
- The 1888 USGS Marysville, California (1:125,000 scale) map depicts the Oregon Division Southern Pacific Railroad oriented north-south through the town. A few unimproved roads are oriented east-west and north-south to the north and east of the Project Area, respectively.

- The 1912 USGS Gridley, California (1:31,680 scale) map depicts residential and commercial growth in the City of Live Oak. The railroad, oriented roughly north-south, is the Southern Pacific Marysville Line and is located east of the Project Area.
- A 1941 aerial depicts a small ditch oriented north-south through the middle of the Project Area. Highway 99 and the Southern Pacific Railroad are oriented north-south, east of the Project Area. Additional residential and commercial growth is evident throughout the area.
- The 1952 Gridley, California (1:24,000 scale) depicts significant residential and commercial growth. Agricultural fields surround the city.
- An aerial photograph from 1973 shows the Project Area as vacant land with a canal oriented north-south near the center of the Project Area. The surrounding area consists of residential housing and Date Street and P Street do not appear to be paved.
- An aerial from 1979 shows the streets surrounding the Project Area are paved. The ditch, oriented north-south, is evident in the center of the Project Area. A small structure, presumably the lift station, is evident in the southeast corner. Additional residential and commercial growth is evident in the surrounding area.
- An aerial photograph from 1984 shows the earthen ditch oriented north-south through the Project Area. The small structure is still present in the southeast corner. The surrounding area consists of residential housing. Date Street and P Street are paved.
- All other aerials photographs from 1998, 2005, 2009, 2010, 2012, 2014, 2016, 2018, and 2020 show the Property in its current state and the lift station standing.

In sum, the property has been undeveloped and vacant until the 1970s, when a small structure was constructed on the southeast portion of the property. The surrounding area shows significant residential and commercial growth through the years and the area is surrounded by agricultural fields.

Sacred Lands File Coordination Methods

A request for information regarding identified Native American cultural sites to the Native American Heritage Commission (NAHC) was submitted by ECORP cultural resources staff on October 25, 2022. At the publication of this IS/MND, the results of the NAHC search of the Sacred Lands File is still pending.

Other Interested Party Consultation Methods

ECORP has not received any responses to the letters sent to the Sutter County Museum as of the date of the preparation of this document.

4.5.3.3 Field Survey

ECORP surveyed the Project Area for cultural resources on October 25, 2022. The Project Area was easily accessible and contained dense, dried grasses with a few trees on the western edge. The Proposed Project is located in an open field, west of Date Street Park. Extra asphalt (likely from paving P Street and Date

Street at some point) covered some of the ground surface and visibility ranged between 0 to 20 percent. The Project Area also contained modern debris.

4.5.3.4 Potential Cultural Resources

Previous investigations by other firms did not result in any previously recorded cultural resources within the Project Area. ECORP identified two new cultural resources as a result of the survey: a historic-era ditch (LO-01) and two historic-era subdivision roads (LO-02 and LO-03).

Lateral No. 2 (LO-01)

LO-01 is a segment of Lateral No. 2, a Reclamation District 777 (RD 777) earthen drainage ditch built in 1913. It enters the Project Area from the east and conveys water in a westerly direction for 60 feet, turns south and proceeds for another 70 feet, then veers southwest for 15 feet and continues south outside of the Project Area. The ditch segment measures approximately 3 to 4 feet deep, 2 feet wide and the bottom and 5 feet wide at the top. Short grasses cover the sides of the lateral ditch.

Date Street (LO-02)

LO-02 is a segment of Date Street, a 50-foot-wide, two-lane residential street in Live Oak that forms the southern boundary of the Project Area. For 70 feet west of P Street, LO-02 possesses paving, subsurface utilities, and sidewalk, curb, and gutter improvements; farther to the west it possesses only paving.

P Street (LO-03)

LO-03 is a segment of P Street, a 60-foot-wide, two-lane collector street in Live Oak that forms the eastern boundary of the Project Area. P Street possesses paving, subsurface utilities, and sidewalk, curb, and gutter improvements.

4.5.3.5 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 definitively 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.

Ethnography

When Euro-Americans first arrived in the region, indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California.

When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about 1/3 of the state's native population, lived in the Central Valley. 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 Central area encompasses the current Project area and includes the Nisenan and Konkow.

Ethnographically, the Project area is in the territory occupied by the Penutian-speaking Nisenan and Konkow groups. Both of these groups spoke versions of a Penutian language classified as Maidu; Nisenan have also been referred to as Southern Maidu and Konkow as Northwestern Maidu based on their linguistic dispersion. As with most pre-contact populations, tribal boundaries were not static, but rather were plastic and constantly changing in part as a reflection of resource exploitation patterns or changes in socio-political relationships between groups.

Project Area History

Following statehood, Sutter County was established in 1850 as one of California's original 27 counties. The town of Live Oak in northern Sutter County was named for a dense strand of live oak trees that grew in the vicinity of a slough just south of the Butte County line. In 1869, A. M. McGrew acquired much of the land that became the town of Live Oak. The California & Oregon Railroad, building north from Marysville, laid rails through McGrew's property in December 1869. At a clearing along the line, the company added a siding to provide local farmers and ranchers with a place to ship wheat and wool. The siding became a natural gathering place. A warehouse went up, followed by H. L. Gregory's store north of Pennington Road. U.S. postal officials in 1874 established a post office at Gregory's store, formalizing "Live Oak" as the town's name. A blacksmith, a saloon, and a handful of houses appeared that fall. A. M. McGrew subdivided his land south of Pennington Road in 1879 into a grid of streets and blocks and began selling town lots. By 1880, Live Oak had a warehouse, two stores, a saloon, a hotel, two blacksmith shops, a Chinese laundry, a school, a meeting hall, and about 25 residences. Its population in 1880 was 125 (ECORP 2022b).

The town owed its existence to the surrounding landscape of farms and ranches. Besides shipping wheat and wool at Live Oak, local farmers and ranchers obtained supplies at H. L. Gregory's store, socialized at the town's saloon, and handled community business at the town's Odd Fellows meeting hall. The income farmers and ranchers earned for their wheat and wool sustained commercial livelihoods in town. Live Oak grew slowly but steadily through the late 19th century. The Southern Pacific Railroad acquired the California & Oregon Railroad in 1887 and integrated the line into its vast western rail network. Through

the early 20th century, Live Oak's population hovered around 300, small by Sacramento Valley standards but large enough to make the town "the center of social life of the area" (ECORP 2022b).

Like other Sacramento Valley towns, Live Oak prospered during the early 20th century as agriculture took on modern forms. The Sutter-Butte Canal Company opened an irrigation canal east of Live Oak in 1907, bringing irrigation water to the area. Electricity arrived in 1909. With it came electric groundwater pumps that increased irrigation water supplies in the area. With irrigation, high-value intensive horticulture (fruit, nut, and vegetable farming) supplanted low-value extensive grain farming and sheep ranching in northern Sutter County. Fruits, nuts, and vegetables had higher market value than wheat and wool: a family that previously made ends meet on 160 acres in wheat could, with irrigation, get by on 20 acres set out in walnuts.

Accordingly, many of Live Oak's earliest settlers subdivided their ranches and began selling off small farm units of 10, 20, and 40 acres. Smaller farms created space for greater numbers of families in northern Sutter County. Many arrived via new modes of transportation. The Sacramento Northern, an electric interurban railroad, arrived in Live Oak in 1906. It provided passenger service between Sacramento and Chico. A decade later, state highway officials completed the first iteration of what is now U.S. 99 through town, providing motorists with a modern paved road up and down the eastern side of the Sacramento Valley. Sutter County crews followed suit by paving Live Oak's streets during the 1920s (ECORP 2022b).

Flooding was Live Oak's greatest problem. The town's business blocks occupied a seasonal wetland. The town's founders in 1874 built Live Oak in a clearing because it obviated the task of clearing tree stumps. The clearing, however, should have indicated seasonal flooding as overflows prevented trees from taking root. A devastating flood in 1907 submerged Live Oak's businesses blocks on Broadway to the level of store countertops, renewing calls for flood control measures in town (ECORP 2022b). New streets and extensions of Live Oak's original streets accommodated new suburban neighborhoods after 1945.

4.5.4 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.

Previous investigations by other firms did not result in any previously recorded cultural resources within the Project Area. ECORP identified two new cultural resources as a result of the survey: a historic-era ditch (LO-01) and two historic-era subdivision roads (LO-02 and LO-03).

Lateral No. 2 (LO-01)

As discussed previously, LO-01 is a segment of Lateral No. 2, an RD 777 earthen drainage ditch built in 1913. It enters the Project Area from the east and conveys water in a westerly direction for 60 feet, turns south and proceeds for another 70 feet, then veers southwest for 15 feet and continues south outside of the Project Area. The ditch segment measures approximately 3 to 4 feet deep, 2 feet wide and the bottom and 5 feet wide at the top. Short grasses cover the sides of the lateral ditch.

Evaluation

Though it contributed to the drainage of flood-prone sections of Live Oak, there is no information in the archival record to support the notion that RD 777's Lateral No. 2 is associated with events that have made a significant contribution to the broad patterns of our history at the local level. LO-01 is not eligible for the NRHP/CRHR under Criteria A/1.

Edward Von Geldern supervised the RD 777 crews that built Lateral No. 2 in 1913. Von Geldern, a civil engineer who spent his entire career in Sutter County, served as county surveyor and county engineer from 1916 through the 1960s. He served a term as president of the California County Engineers' Association in 1919 and received a lifetime achievement award from the group in 1969. Von Geldern also played an instrumental role in developing Sutter County's highway system (ECORP 2022b). Despite these achievements, Van Geldern does not rank among the most influential engineers in California history. LO-01 is not associated with the lives of persons significant in our past, and it is not eligible for the NRHP/CRHR under Criteria B/2.

Lateral No. 2 consists of an earthen channel indistinguishable from similar structures in Live Oak and throughout California. It does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possesses high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. Therefore, LO-01 is not eligible for the NRHP/CRHR under Criteria C/3.

The information potential of Lateral No. 2 is expressed in its built form and in the historical record. It has not yielded, nor is it likely to yield, information important in history or prehistory. Therefore, LO-01 is not eligible for the NRHP/CRHR under Criteria D/4.

Date Street (LO-02)

As discussed previously, LO-02 is a segment of Date Street, a 50-foot-wide, two-lane residential street in Live Oak that forms the southern boundary of the Project Area. For 70 feet west of P Street, LO-02 possesses paving, subsurface utilities, and sidewalk, curb, and gutter improvements; farther to the west it possesses only paving.

Date Street (originally called Lovett Way) became a legal and spatial entity in 1949 when George and Alma Forguson filed the Plat of Forguson Subdivision at the Sutter County Recorder's Office. Live Oak council members approved the plat on April 6, 1949, and surveyors began staking out Date Street soon thereafter (ECORP 2022b). Aerial photography from 1941 shows no streets present in the Project Area. Aerial photography from 1958 shows Date Street intact.

Evaluation

Date Street facilitated vehicular transportation from the Forguson Subdivision, a 1949 Live Oak neighborhood, to P Street, a north-south collector street that led to Pennington Road, the town's main east-west arterial street. However, there is nothing in the archival record to suggest that Date Street is associated with events that have made a significant contribution to the broad patterns of our history. Therefore, LO-02 is not eligible for the NRHP/CRHR under Criteria A/1.

City of Live Oak crews built and maintained Date Street after 1949. LO-02, however, is not associated with the lives of persons significant in our past, and it is not eligible for the NRHP/CRHR under Criteria B/2.

As a conventional two-lane residential street, indistinguishable from others in Live Oak, Date Street does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possesses high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. Therefore, LO-02 is not eligible for the NRHP/CRHR under Criteria C/3.

The information potential of Date Street is expressed in its built form and in the historical record. The resource has not yielded, nor is it likely to yield, information important in history or prehistory. Therefore, LO-02 is not eligible for the NRHP/CRHR under Criteria D/4.

LO-03 (P Street)

As discussed previously, LO-03 is a segment of P Street, a 60-foot-wide, two-lane collector street in Live Oak that forms the eastern boundary of the Project Area. P Street possesses paving, subsurface utilities, and sidewalk, curb, and gutter improvements.

The southern extension of P Street became a legal and spatial entity in 1949 when George and Alma Forguson filed the Plat of Forguson Subdivision at the Sutter County Recorder's Office. Live Oak council members approved the plat on April 6, 1949, and surveyors began staking out the southern extension of P Street soon thereafter (ECORP 2022b). Aerial photography from 1941 shows no streets present in the Project Area. Aerial photography from 1958 shows the southern extension of P Street intact.

Evaluation

P Street facilitated vehicular transportation from the Forguson Subdivision, a 1949 Live Oak neighborhood, to Pennington Road, the town's main east-west arterial street. However, there is nothing in the archival record to suggest that P Street is associated with events that have made a significant contribution to the broad patterns of our history. Therefore, LO-03 is not eligible for the NRHP/CRHR under Criteria A/1.

City of Live Oak crews built and maintained the southern extension of P Street after 1949. LO-03, however, is not associated with the lives of persons significant in our past, and it is not eligible for the NRHP/CRHR under Criteria B/2.

As a conventional two-lane collector street, indistinguishable from others in Live Oak, P Street does not embody the distinctive characteristics of a type, period, or method of construction, or represent the work

of a master, or possesses high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. Therefore, LO-03 is not eligible for the NRHP/CRHR under Criteria C/3.

The information potential of P Street is expressed in its built form and in the historical record. The resource has not yielded, nor is it likely to yield, information important in history or prehistory. Therefore, LO-03 is not eligible for the NRHP/CRHR under Criteria D/4.

Conclusions

The records search and the 2022 field survey resulted in the documentation of two historic-era cultural resources in the Project Area. The historic-era ditch (LO-01) and roads (LO-02 and LO-03) underwent evaluation using NRHP and CRHR eligibility criteria and were found to not be eligible for either register.

However, there always remains the potential for ground-disturbing activities to expose previously unrecorded historic 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.

Due to the presence of alluvium along the Feather River, located two miles east of the Project Site and given the likelihood of pre-contact archaeological sites located along perennial waterways, a moderate potential exists for buried pre-contact archaeological sites in the Project Site. 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
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

No known burial sites were identified during the field survey. Although Native American burial sites have not been identified on the Project Site, there is a possibility that unanticipated human remains will be encountered during ground-disturbing project-related activities and as such, mitigation is required. With implementation of mitigation measure CUl-1, impacts to unknown human remains would be less than significant.

4.5.5 Mitigation Measures

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, 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 archaeology, 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 lead agencies. The agencies 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, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Sutter County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 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 (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 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: *During construction*

Monitoring/Enforcement: *City of Live Oak*

4.6 Energy

4.6.1 Environmental Setting

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). PG&E provides power to Sutter County, using a diverse portfolio of energy sources, including natural gas, hydropower, geo-thermal, nuclear, wind, and solar energies. PG&E service area spans over 70,000 square miles in the Northern California areas and provides about 5.2 million people with electricity and natural gas.

Potential energy-related impacts associated with this Project include the depletion of nonrenewable resources (e.g., oil, natural gas, coal) and emissions of pollutants during the construction. Since the Proposed Project is a lift station replacement, there will be no operational energy uses, and thus will not be discussed in this analysis. Discussion of the impact will focus on the single source of energy that is relevant to the Proposed Project: the equipment-fuel necessary for Project construction.

4.6.1.1 Energy Consumption

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

The electricity consumption and natural gas consumption associated with all land uses in the County of Sutter from 2016 to 2020 is shown in Table 4.6-1. As indicated, the demand for electricity has gone up and down since 2016, slightly increasing over the years. In general, demand for natural gas has increased since 2016.

Table 4.6-1. Electricity Consumption in Sutter County 2016-2020

Year	Electricity Consumption (kilowatt hours)	Natural Gas Consumption (therms)
2020	672,551,697	21,997,217
2019	636,606,549	20,945,379
2018	636,643,617	20,296,466
2017	646,434,323	20,951,170
2016	631,002,716	18,006,822

Source: CEC 2021b

Total automotive fuel consumption in Sutter County from 2017 to 2021 is shown in Table 4.6-2. As shown, automotive fuel consumption decreased since 2017.

Table 4.6-2. Automotive Fuel Consumption in Sutter County 2017-2021

Year	Fuel Consumption (gallons)
2021	74,419,049
2020	67,274,613
2019	76,096,151
2018	75,660,023
2017	76,198,022

Source: CARB 2021

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 natural gas and thus, would not contribute to the County wide usage. While the new lift station would require the use of electricity, its consumption of electricity would be the same or only negligibly greater than current consumed by the existing lift station under current conditions. The one quantifiable 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 Sutter 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	79,606 gallons	0.1%

Source: Climate Registry 2016, see Appendix C.

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.

As shown in Table 3.6-3, the Project's gasoline fuel consumption during the construction period is estimated to be 79,606 gallons of fuel, which would increase the annual gasoline fuel use in the county by 0.1 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 replacement of a lift station within the City of Live Oak. 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 (CGS 2002).

The Great Valley covers more than 6,500 square miles and fills a northwest-trending structural depression bounded on the west by the Great Valley fault zone and the Coast Ranges and on the east by the Sierra Nevada and the Foothills fault zone. Relatively few faults in the Great Valley have been active during the last 10,000 years. Most of the surface of the Great Valley is covered with Holocene and Pleistocene-age alluvium, composed primarily of sediments from the Sierra Nevada and the Coast Ranges that were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits. Older Tertiary deposits underlie the Quaternary alluvium (Hackel 1966).

4.7.1.2 Site Geology

According to the (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.

4.7.1.3 Site Soils

According to the NRCS through the Web Soil Survey database, the Project Site is composed of the Conejo-Urban land complex soil unit, with 0 percent slope, and a Major Land Resource Area (MLRA) 17[3], 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 Project soil is moderately well-drained, has moderate/high runoff potential, and no rating for flooding frequency. This soil erosion rating and a low linear extensibility (shrink-swell) (NRCS 2022).

[3] MLRAs are geographically associated land resource units (LRUs) that share a common land use, elevation and topography, climate, water, soils, and vegetation. Identification of these large areas is important in statewide agricultural planning and has value in interstate, regional, and national planning.

Table 4.7-1. Project Area Soil Characteristics				
Soil Name, Symbol	**Percentage of Site**	**Drainage**	**Flooding Frequency Class**	**Erosion Hazard[1]**
Conejo-Urban land complex soil unit, 0 percent slope, MLRA 17, 127	100%	Moderately well-drained	None	None
	Runoff Potential[2]	**Linear Extensibility** (Rating)[3]	**Frost Action[4]**	
Conejo-Urban land complex soil unit, 0 percent slope, MLRA 17, 127	C/D (high)	1.7% (low)	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 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. 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.

4.7.1.4 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 which 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 2010a).

According to the DOC Data Viewer interactive mapping program (2022c), the closest earthquake faults to the Project Site are the Bangor Fault Zone (located in the Cleveland Hills Fault Zone approximately 19

miles northeast of the Site), the Paynes Peak Fault Zone (located approximately 20 miles northeast of the Site), and the Sutter Buttes Fault Zone (located approximately 8 miles southwest of the Site), all listed as Quaternary era faults.

The closest active fault (movement within the last 35,000 years) near the Project Site is the Cleveland Hills Fault Zone. The Cleveland Hills fault, running north and south, is roughly located between Palermo and Rackerby just south of Lake Oroville. This fault is a Historic era fault and is approximately 4.5 miles east of Palermo (USGS 2022b).

4.7.1.5 Paleontological Resources

A search was completed of the University of California Museum of Paleontology (UCMP) paleontological records on November 8, 2022. The search included a review of the institution's paleontology specimen collection records for Sutter County, including the Project area and vicinity. In addition, 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 Sutter County by ECORP. The purpose of the assessment was to determine the sensitivity of the Project area, whether or not known occurrences of paleontological resources are present within or immediately adjacent to the Project area, and whether or not 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 that multiple paleontological specimens were recorded from 30 identified localities and 7 unidentified localities in Sutter County. Paleontological resources in Sutter County include fossilized remains of plants, mammals, vertebrates and invertebrates. None of the identified sites are within the City of Live Oak (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?	☐	☐	☒	☐

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 2 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 FEMA as:

- 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 2022b).

The Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. 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
- 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 soil does not have a rating for erosion potential. Construction activities during the Project would disturb soils and potentially expose them to wind and water erosion. Because the Project does not involve more than one-acre in area, the Project will not be required to prepare a stormwater pollution prevention plan (SWPPP) to comply with the Regional Water Quality Control Board's (RWQCB) General Construction Storm Water Permit. Best management practices (BMPs) are included as part of the Project Site plans and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see Figure 4). 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 no rating 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.[4] 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 2022a). The Project is the replacement of sewer lines, reconnection of existing storm drainage and minor improvements to the city's lift station. All new 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, either infilling the onsite drainage ditch or

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

providing temporary plates to allow for equipment to pass over the ditch, and minor improvements to the city's lift station. 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 three 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, the linear extensibility value for the Site is 1.7 percent. Soils with linear extensibility in that range correlate to soils having a low 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

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 UCPM 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 Live Oak 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 Live Oak 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 CO2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in carbon dioxide equivalents 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 significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The FRAQMD has not adopted a GHG significance threshold. As previously described, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Thus, in the absence of any GHG emissions significance thresholds the projected emissions are compared to the GHG thresholds recommended by the Sacramento Metropolitan Air Quality Management District (SMAQMD), the air pollution control officer for Sacramento County. The SMAQMD thresholds of 1,100 metric tons of CO_2e annually for construction and 1,100 metric tons of CO_2e annually during operations are considered appropriate for the purposes of this analysis due to the proximities of Sacramento and Sutter counties and the similarities between both geomorphic and urban patterns of the two neighboring air district jurisdictions. Therefore, the threshold used to analyze the Project is specific to the analysis herein and the lead agency retains the ability to develop and/or use different thresholds of significance for other projects in its capacity as lead agency and recognizing the need for the individual threshold to be tailored and specific to individual projects.

In Center for Biological Diversity v. Department of Fish and Wildlife (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment." The Supreme Court-reviewed study noted, "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts." (Crockett, Addressing the

Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227.)

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.

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. Once construction is complete, the generation of these GHG emissions would cease.

Table 4.8-1. Construction-Related Greenhouse Gas Emissions

Emission Source	CO_2e (Metric Tons/ Year)
Construction	808
Potentially Significant Impact Threshold	*1,100*
Exceed *Significant Impact* Threshold?	**No**

Source: RCEM version 9.0.0. Refer to Appendix A for Model Data Outputs.
Notes: Emission calculations account for the export of 200 cubic yards of soil material daily during the Grading/Excavation phase and import of 50 cubic yards of soil material daily during the Drainage/Utilities/Subgrade phase, as provided by the Project proponent.

As shown in Table 4.8-1, Project construction would result in the generation of approximately 808 metric tons of CO_2e over the course of construction, which is below the significance threshold of 1,100 metric tons of CO_2e. Once construction is complete, the generation of these GHG emissions would cease.

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 P Street Lift Station. Once upgrades are complete, the Project 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
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 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 Executive Order 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 Assembly Bill 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 Sutter County, including those in Live Oak, is managed by the Sutter County Environmental Management Department. The Department is responsible Hazardous Materials Business Plan (HMP) Program which is one program element within the Sutter County Certified Unified Program Agency (CUPA). 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 (Business Plan) for the safe storage and use of chemicals.

Under Government Code § 65962.5, both the California Department of Toxic Substance Control (DTSC) and the State Water Resources Control Board (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 zero open cases of hazardous waste violations within the City of Live Oak.

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 demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. None of these Project components 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. 2030 Additionally, 2030 General Plan includes Policy PS-4.1 which aims to protect city residents from the harmful effects of hazardous materials. Policy PS-4.1 is as follows:

> "The City, through its discretionary review authority, will assess potential risks associated with hazardous materials used, stored, transported, and disposed, and ensure they are handled in a safe manner and in compliance with local, state, and federal safety standards."

Compliance with federal, state, and city requirements would reduce this potential impact to a less than significant impact during construction of the Project.

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?	☐	☐	☐	☒

No impact.

The Project Site is not located within one-quarter mile of any existing or proposed school. 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 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?	☐	☐	☐	☒

No impact.

Under Government Code § 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 discussed previously, a search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations on the Project site. As a result, 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)	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 Yuba County Airport, located approximately 13 miles south of the Site. According to the Yuba County Airport Land Use Compatibility Plan (2010), the Proposed Project is not located within the Airport Influence Area, nor within any land compatibility, overflight, or

noise zones (Yuba County 2010). The Project is the replacement of sewer lines, reconnection of storm-drain lines, the infill or temporary crossing of an onsite drainage ditch, and minor improvements to the City lift station. 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. Per 2030 General Plan Policy PS-3.4, the City will coordinate with the County Office of Emergency Services to identify and establish evacuation routes and operational plans to be used in case of dam failure, flood disaster, and fire. 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 (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (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, the infill or temporary crossing of an onsite drainage ditch, and minor improvements to the city lift station. 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 (DWR 2013).

The Project is located within the Gilsizer Slough-Snake River Watershed (USEPA 2022). The watershed covers approximately 173,080 acres and is a part of the Lower Sacramento watershed (USGS 2022c).

Groundwater

Groundwater, in the State of California is managed and monitored by the California Department of Water Resources DWR). The Project Site is located within boundaries of the East Butte Groundwater Subbasin, which is part of the Sacramento River Hydrologic Region. The East Butte Subbasin (basin number 5-021.59) lies in the central portion of the Sacramento Basin and the northern portion of the Sacramento-San Joaquin Delta. The East Butte Subbasin covers 265,390 acres (415 square miles). The topography of the subbasin is comprised primarily of the gentle flatlands of the Sacramento River Valley. The only prominent topographic feature near the subbasin is the Sutter Buttes at its northern boundary, a Pliocene volcanic plug which rises abruptly 2,000 feet above the surrounding valley floor. The subbasin is bounded on the west and northwest by Butte Creek, on the northeast by the Cascade Ranges, on the southeast by the Feather River and the south by the Sutter Buttes (CNRA 2021).

4.10.1.2 Project Site Hydrology and Onsite Drainage

The Project Site is located on relatively flat terrain situated at an elevational range of approximately 72 to 75 feet AMSL. According to the National Wetlands Inventory, no aquatic resources have been previously mapped onsite. (ECORP 2022a).

In the Project area, the rainy period of the year lasts for 5.2 months, from November 4 to April 10, with a 15 percent chance of a given day being a wet day. The month with the most wet days in Live Oak is February, with an average of 8.0 days with at least 0.04 inches of precipitation e month with the fewest wet days in Live Oak is August, with an average of 0.1 days with at least 0.04 inches of precipitation (Weatherspark 2022).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the Project area (Map No. 0603950001C) shows that the Project Site is in Zone B, meaning that the area is in the moderate flood hazard zone, usually the area between the limits of the 100- year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile (FEMA 2022a).

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.

The Proposed Project does not affect one or more acres and therefore is exempt from obtaining a SWPPP. However, as discussed previously, the Project Site Plans contain BMPs to prevent stormwater pollution and sediment erosion impacts.

Implementation of BMPs would ensure that the Proposed Project would not create or 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?	☐	☐	☒	☐

Less than significant impact.

The Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. This replacement would not substantially reduce the amount of existing

groundwater recharge potential or supplies. 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 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) Less than significant impact.

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 less than one acre of total land area. As such, a NPDES Construction General Permit would not 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 reduce potential impacts to Site runoff and sediment transport, the Proposed Project shall comply with the BMPs noted on the Project Site plans (Sheet C-001) for construction and post-construction activities.

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 off-site. 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 facilities within P Street and Date Street. 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 Project BMPs being implemented during the construction phase would ensure the effective minimization of excessive soil erosion and sedimentation and eliminate non-stormwater discharge off-site. As discussed previously, BMPs would be included as part of the Proposed Project. 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 the lift station 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 No. 0603950001C) show that the Project Site is in Zone B and not located within a 100-year flood zone. All Project improvements would be underground with the exception of the improvements to the lift station. 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 2013 Sutter County Local Hazard Mitigation Plan (LHMP), the County is currently partnering with Live Oak and Yuba City to develop a LHMP update to their 2013 plan, the city and Project Site are projected from flooding by levees along the Sacramento River, Butte Creek, and the Feather River. 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 lift station, 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 Sutter County Groundwater Sustainability Agency (GSA) East Butte Subbasin and the Sutter County Groundwater Management Plan (Sutter County 2012). 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 demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. The Project Site is within the General Plan land use designation of Civic and Zoning District of Small Lot Residential (R-2). The City of Live Oak General Plan identifies the areas adjacent to the Project as being within the Single-Family Residential, Multi-Family Residential, Civic, and Park 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, infill or temporary crossing of an onsite drainage ditch, and minor improvements to the city's lift station. The majority of the proposed pipeline alignment would be within the Project Site and street ROW. Replacing the existing pipelines 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 (SMARA) 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 2030 General Plan nor the California Department of Conservation Division of Mine Reclamation (DMR), identifies the Project Site as within a mineral resource zone or mine site (City of Live Oak 2010a; 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

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 (Federal Highway Administration [FHWA] 2011). 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 (FHWA 2011).

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 (Caltrans 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (Harris Miller Miller & Hanson Inc. [HMMH] 2006).

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 nearest sensitive receptors to the Project Site are single-family residences located adjacent to the northern and western boundaries of the Project Site. There are also single-family residences located to the south of the Project Site across Date Street and to the east of the Project Site across P Street.

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 Live Oak, which encompasses the Project Site, is impacted by noise sources typical of a small city. According to the City of Live Oak General Plan, examples of major noise sources existing within the city include Highway 99 (located 0.3 mile east of the Project Site), major local streets, railroad operations, aircraft overflight and local industrial facilities. The Project Site is not located in the vicinity of any of these types of land uses, though is affected by traffic noise on Date Street and P Street as well as aircraft overflights. Beyond these sources, the existing ambient noise environment at the Project Site is influenced by the typical sources of noise associated with a residential neighborhood.

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 4 or 5.

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}
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 dBA	66 dBA	58 dBA

Table 4.13-1. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density						
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 dBA	61 dBA	54 dBA
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 dBA	55 dBA	49 dBA
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 dBA	50 dBA	44 dBA
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 dBA	45 dBA	39 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 dBA	40 dBA	34 dBA

Source: The American National Standards Institute (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 with mitigation incorporated.

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 nearest sensitive receptors to the Project Site are single-family residences located adjacent to the northern and western boundaries of the Project Site. There are also single-family residences located to the south of the Project Site across Date Street and to the east of the Project Site across P Street.

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 three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one 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.

The City does not promulgate a numeric threshold pertaining to the noise associated with construction. This is because construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Instead, the City of Live Oak Municipal Code Section 9.30.020 states that it is unlawful for any person within a residential zone, or within a radius of 500 feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects, or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist or any other construction-type device between the hours of 10:00 p.m. and 7:00 a.m. in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance, unless beforehand a permit

has been duly obtained from the officer or body of the City having the function to issue permits of this kind. 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 Federal Highway Administration'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 Project Site and at various distances from sensitive receptors. Therefore, this analysis employs the Federal Transit Administration (FTA) guidance for calculating construction noise, which recommends measuring construction noise produced by all construction equipment from the center of the Project Site (FTA 2018), which in this case is approximately 53 feet from the nearest sensitive receptor. The anticipated short-term construction noise levels generated for the necessary equipment is presented in Table 4.13-2.

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?
Grubbing/Land Clearing	78.2 dBA	*85*	**No**
Grading/Excavation	83.6 dBA	*85*	**No**
Drainage/Utilities/Sub-grade	84.9 dBA	*85*	**No**
Paving	78.5 dBA	*85*	**No**

Source: Construction noise levels were calculated by ECORP Consulting 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 Roadway Construction Emissions Model (RCEM). RCEM contains default construction equipment and usage parameters for typical roadway construction projects. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project Site (FTA 2018), which is 53 feet from the residences to the south.

L_{eq} = The equivalent energy noise level, 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.

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.

While no noise standard would be exceeded by construction of the Proposed Project, the Project is located within a noise-sensitive residential neighborhood. Project construction, while temporary, would still instigate a substantial increase of noise over existing conditions during the times of construction activity. Thus, mitigation measure NOI-1, which mandates the implementation of noise-related best management practices, is required.

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 40 trips in a single day (up to 20 construction worker commute trips and up to 20 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 40 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.

Operational Noise Impacts

The Project proposes necessary upgrades to the City of Live Oak's wastewater treatment conveyance 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 Live Oak wastewater treatment conveyance system for the purpose of accommodating existing and projected 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 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: FTA 2018; Caltrans 2020

The City of Live Oak 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 0.3 inches per second 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.

Consistent with FTA recommendations for calculating construction vibration, construction vibration was measured from the center of the Project Site (FTA 2018). The nearest structure of concern to the construction site, with regard to groundborne vibrations, are the single-family residences directly north of the Project Site approximately 53 feet from the Project Site center.

Based on the representative vibration levels presented for various construction equipment types in Table 4.13-3 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential project construction vibration levels. The FTA provides the following equation:

$$[PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}]$$

Table 4.13-4 presents the expected Project related vibration levels at a distance of 53 feet.

Table 4.13-4 Construction Vibration Levels at 53 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold?
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jackhammer	Small Bulldozer/ Tractor	Vibratory Roller			
0.028	0.024	0.011	0.001	0.067	**0.067**	*0.3*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 4.13-4 (FTA 2018). Distance to the nearest structure of concern is approximately 53 feet measured from Project Site center.

As shown in Table 4.13-4, 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 0.3 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 9.5 miles northwest of the closest airport, Sutter County Airport. Aircraft noise does not significantly impact the Project Site area and would not expose people visiting or working on the Project Site to excess airport noise levels. No impact.

4.13.3 Mitigation Measures

NOI-1: The following measures shall be applied to the Project during construction:

1. All construction equipment, fixed or mobile, will be equipped with properly operating and maintained mufflers, consistent with manufacturer standards.

2. All stationary construction equipment will be placed so that emitted noise is directed away from the noise sensitive receptors nearest the Project Site (the residences to the north and west of the site).

3. As applicable, shut off all equipment when not in use.

4. Equipment staging shall be located in areas that create the greatest distance between construction-related noise/vibration sources and sensitive receptors to the north and west of the site.

5. Jackhammers, pneumatic equipment, and all other portable stationary noise sources will be directed away from the residences to the north and west of the site to the extent possible. Either one-inch plywood or sound blankets can be utilized for this purpose. They should reach up from the ground and block the line of sight between equipment and the nearest off-site residences. The shielding should be without holes and cracks.

6. No amplified music and/or voice will be allowed on the construction site.

Timing/Implementation: During construction

Monitoring/Enforcement: The City of Live Oak Planning Department and construction lead.

4.14 Population and Housing

4.14.1 Environmental Setting

According to the California Department of Finance (DOF), which provides estimated population and housing unit demographics by year throughout the State, the City's population decreased 14.35 percent between 2012 and 2022, from 8,215 to 9,394. DOF estimates that there were 2,945 total housing units in the City, and a 3.6 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 Sutter County Sheriff's Office provides law enforcement services in the City of Live Oak. The closest Sheriff's Community Service Center is located at 2755 Fir Street in Live Oak, CA, approximately 0.18-mile northeast of the Project Site.

The Sutter County Sheriff's Office provides local police protection services and 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 (Sutter County 2022a).

4.15.1.2 Fire Services

Fire protection services for the Project area are provided by the Sutter County Fire Department-County Service Area F. The Sutter County Fire Department is an all-risk agency that provides fire protection for most unincorporated areas of Sutter County and contract services for the city of Live Oak. The department was formed in 1996 with the merger of the Live Oak, Sutter and Oswald-Tudor fire departments. The department is responsible for providing fire protection and prevention, emergency medical care, hazardous materials mitigation and rescue operations for the citizens of Sutter County.

There are automatic and mutual aid agreements in place with all other agencies in the county. They include: the Yuba City fire department, Meridian Fire Protection District and the Sutter Basin Fire Protection District (Robbins Fire Department). Each station implements Constant Staffing and has personnel consisting of one career captain on each shift (A,B,C) and one career fire engineer at stations 8 and 6 and three career fire engineers at station 5. Personnel work a 48/96 schedule (48 hours on, 96 hours off). This staffing is augmented by approximately 10 to 15 volunteer firefighters, volunteer engineers and volunteer lieutenants assigned to each station (Sutter County 2022b).

4.15.1.3 Schools

The Live Oak Unified School District (LOUSD) provides public educational services within the Live Oak area. LOUSD consists of 5 schools in the Live Oak area, ranging from elementary through high school levels. LOUSD currently has an enrollment of 1,862 students (LOUSD 2022). Encinal Elementary School is the only school located outside the limits of the City of Live Oak.

4.15.1.4 Parks

The City owns and maintains six parks, including:

Live Oak Soccer Park is the City's newest park, on 26 acres, and is located on Idle Street. This park has 3 full sized soccer fields, an area for the kids to play and a walking/running trail around the park for the whole family to enjoy.

Live Oak Memorial Park is one of the City's first parks and is located on Pennington Road between "O" and "P" Streets. Many community events and family activities are held here. Basketball courts, volleyball net, baseball field, and hopscotch are a few of the regular activities that are available. Two large play structures are open year-round, included shade areas with picnic tables and BBQ facilities are for everyone to use. (City pool connected to Park).

Pennington Ranch Park is located between Musgrave Avenue and Megan Way. This Park has a large children's and tot lot play equipment, two half-court basketball courts, covered areas with picnic tables and BBQs, and a large open play area.

Oak Tree Park is located behind City Hall at the corner of Larkin and Pennington Roads. This is a smaller Park with a tot play structure, two picnic tables, drinking fountain and several benches.

Date Street Park is located between "O" and "P" Streets and includes a soccer field, drinking fountain, picnic tables, benches, and a play structure. This park is also across "P" Street from the Proposed Project.

The Live Oak Riverfront Park Boat Launching Facility is located at 1100 Pennington Road. The facility was originally constructed in 1965 by the US Army Corps of Engineers. The launch ramp was 25 feet wide,160 feet long, and occasionally became unusable at lower river levels. The launch ramp provided river access to sport fisherman and recreational river users in the vicinity of the City of Live Oak. This park is managed and maintained by the County of Sutter General Services Department (Live Oak 2022).

4.15.1.5 Other Public Facilities

Other public facilities found in the Project vicinity include the Live Oak City Hall located at 9955 Live Oak Boulevard and the Live Oak Barber Branch of the Sutter County Library located at 10321 Live Oak Boulevard.

At build-out, the City of Live Oak is projected to have added 36,209 new residents to its current 8,791 population, growing to 45,000 residents. The City will also have added 12,800 new workers to its current 900, growing to 13,700 people working in Live Oak. The combined service population will grow from its current 9,007 to 48,288 at build-out. This will require approximately 57,000 square feet (SF) of additional public facilities to serve all new development (Live Oak 2011a).

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?	☐	☐	☐	☒
	Parks?	☐	☐	☐	☒
	Other Public Facilities?	☐	☐	☐	☒

No impact.

The Proposed Project consists of the replacement of sewer lines, reconnection of existing storm drainage, the infill or temporary crossing of an onsite drainage ditch, and minor improvements to the City's Life Station. 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. Therefore, 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 within 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 ramp at the Live Oak Riverfront Park Boat Launching Facility.

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 off-site 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 Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. Portions of the Proposed Project would be constructed within the street ROWs as shown in the Project Site Plan. According to the City's 2030 General Plan, the city streets are classified as

either arterial or collector streets (Live Oak 2010a). Most but not all, streets in the city have curbs gutters and sidewalks. Due to the relatively flat terrain and Mediterranean climate making bicycle riding throughout the city comfortable for most of the year, the city has expanded its bicycle and pedestrian network throughout. In 2016, the city adopted its first ever *Live Oak Bicycle, Pedestrian & Trails Plan* in order to further embrace the city's vision of a community where bicycling and walking serve the transportation needs of residents and visitors (Live Oak 2016).

The Proposed Project would replace aging facilities with new wastewater pipelines, reconnections of storm drain facilities, infill or temporary crossing of an onsite drainage ditch, and improvements to the lift station and security wall surrounding it. The Proposed Project is intended to maintain service capacity in the wastewater and storm drain systems in anticipation of future growth, 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 2030 General Plan Circulation 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 lift station would not conflict with any program, plan, ordinance, or policy addressing the circulation system in the 2030 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)?	☐	☐	☐	☒

No 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) level of service (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[5] 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.

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 from the Proposed Project is based on the number of construction workers required to install the new facilities as discussed in Section 2.0 Project Description. As discussed in Section 2.0, on average, there will be approximately 10 employees at the Project Site while construction activities are occurring. Construction is anticipated to start in May of 2024 and take approximately 250 days to complete. Completion of the Proposed Project is estimated to result in a daily maximum of 20 trips[6] over an approximately 250-day construction period.

The Project does not propose any new commercial, industrial, residential or other development that would increase the VMTs 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
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 not result in the re-design of the existing roadway system. Nor would the Project introduce incompatible uses to the roadways. The Proposed Project would have no impact in this area.

[5] "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 document, 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.

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

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

No impact.

The Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. 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 services 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

4.18.1 Environmental Setting

The following information was provided by ECORP Consulting, Inc. (2022c) as a part of the Cultural Resources Inventory and Evaluation 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.

Ethnographically, the Project Area is in the territory occupied by the Penutian-speaking Nisenan, Patwin, and Konkow groups. All three of these groups spoke versions of a Penutian; Nisenan have also been referred to as Southern Maidu and Konkow as Northwestern Maidu based on their linguistic dispersion. As with most pre-contact populations, tribal boundaries were not static, but rather were plastic and constantly changing in part as a reflection of resource exploitation patterns or changes in socio-political relationships between groups.

4.18.1.1 Nisenan

Nisenan were observed by early ethnographers to inhabit the drainages of the Yuba, Bear, and American rivers, and also the lower reaches of the Feather River, extending from the east banks of the Sacramento River on the west to the mid to high elevations of the western flank of the Sierra Nevada to the east. The territory extended from the area surrounding the current City of Oroville on the north to a few miles south

of the American River in the south. The Sacramento River bounded the territory on the west, and in the east, it extended to a general area located within a few miles of Lake Tahoe.

As a language group, Nisenan (meaning "from among us" or "of our side") are members of the Maiduan Family of the Penutian stock and are generally divided into three groups based on dialect differences: the Northern Hill (mountain) Nisenan in the Yuba River drainage; the Valley Nisenan along the Sacramento River; and the Southern Hill (foothills) Nisenan along the American River. Ethnographic informants indicated that individual and extended families "owned" hunting and gathering grounds, and trespassing was discouraged. Residence was generally patrilocal, but couples actually had a choice in the matter.

At the time of contact, ethnographers identified that the basic social and economic group for the Nisenan was the family or household unit. The nuclear and/or extended family formed a corporate unit. These basic units were combined into distinct village or hamlet groups, each largely composed of consanguine relatives.

Tribelet populations of Valley Nisenan were as large as 500 persons at contact, while foothill and mountain tribelets ranged between 100 and 300 persons. It is estimated that Nisenan tribelet territories averaged approximately 10 miles along each boundary, or 100 square miles, with foothill territories tending to encompass more area than mountain territories.

Early Nisenan groups practiced seasonal migration, a subsistence strategy involving moving from one area or elevation to another to harvest plants, fish, and hunt game across contrasting ecosystems that were in relatively close proximity to each other.

Ethnographers noted that during most of the year, Nisenan usually lived in permanent villages located below about 2,500 feet that generally had a southern exposure, were surrounded by an open area, and were located above, but close to watercourses. The rather large uninhabited region between the 3,000-foot contour and the summit of the Sierra Nevada was considered open ground which was only used by communities living along its edge.

The first known occupation by Euro-Americans was marked by American and Hudson Bay Company fur trappers in the late 1820s establishing camps in Nisenan territories. This occupation was thought to have been peaceful.

In 1833 a deadly epidemic (probably malaria) swept through the Sacramento Valley and had a devastating effect on Nisenan populations. Entire villages were lost, and many surviving Nisenan retreated into the hills. An estimated 75 percent of their population was wiped out.

The mountain Nisenan groups encountered Europeans in their territory but were not adversely affected by the epidemics and early settlers. The discovery of gold, however, led to their territory being overrun within a matter of a few years. This dynamic led to widespread killing, destruction, and persecution of the Nisenan and their culture. The survivors were relegated to working in agriculture, logging, ranching, or domestic pursuits.

The turn of the twentieth century was fraught with deplorable conditions for the surviving Nisenan populations, marked by low educational attainment, high unemployment, poor housing and sanitation, and prevalence of alcoholism. The 1960 U.S. census reported 1,321 Native Americans resided in the counties originally held as Nisenan territory, but none had tribal affiliation. Sutter County listed 802 Native Americans, of which only four were known descendants of the Valley Nisenan. El Dorado, Placer, Yuba, and Nevada counties had several Nisenan families in the 1970s who are descended from mountain groups and could speak the language and retained knowledge of traditional lifeways.

Despite enduring over a century of adversity and hardship, descendants of the pre-contact Nisenan exist today. They are members of modern society and some people still practiced Nisenan customs despite the old ways having been largely lost. Nisenan and other modern Native American populations participate in pan-Indian activities and celebrations. Nisenan descendants continue to be active in social movements and organizations that seek to improve the Native American situation in the dominant America culture.

4.18.1.2 Patwin

Patwin territory included both the River and Hill Patwin and extended from the southern portion of the Sacramento River Valley to the west of the river, from the town of Princeton south to San Pablo and Suisun bays. As a language, Patwin (meaning *people*) is a part of the Wintu linguistic family, which has three main groups: Southern or Patwin; Central, of Glenn and Tehama counties; and the Northern, of the upper Sacramento, lower Pit, and the upper Trinity drainages.

The Hill Patwin territory includes the lower hills of the eastern Coast Range Mountain slope (Long, Indian, Bear, Capay, Cortina, and Napa Valley). Between there and the foothills, the grassy plains were largely unsettled, used mainly as a foraging ground by both valley and hill groups (Johnson 1978). Patwin pre-contact population numbers are not precise, but Kroeber (1976) estimates 12,500 for the Wintu, Nomlaki, and Patwin groups. These numbers reflect groups prior to the 1833 malaria epidemic.

Individual and extended families owned hunting and gathering grounds, and trespassing was discouraged. Residence and marriage were generally matrilocal, but unrestricted. Politically, the Patwin were divided into *tribelets* made up of a primary village and a series of outlying hamlets, presided over by a more-or-less hereditary chief. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, owned by the chief. The chief had unrestricted power and presided over economic and ceremonial decisions.

One of the most distinctive aspects of the Patwin culture was the cult system, found throughout northern central California. The main feature of the cult was the occurrence of one or more secret societies, whose membership was by strict initiation, each with its own series of dances and rituals (Johnson 1978). Patwin culture is most distinctive in that it possessed three secret societies: the ghost, Hesi, and Kuksu. These involved elaborate ceremonial activities consisting of singing and dancing. Membership included mostly males, beginning around the ages of 8 to 16, but on limited occasions, included high-status women (Johnson 1978). Everyday Patwin life centered on the rituals performed within the secret societies. Details involving the ceremonies varied, but most had sacred dances requiring careful preparation, costume, and music. These dances could last several days.

The earliest historical accounts of the Project Area begin with Spanish mission registers of baptisms, marriages, and deaths of Native Americans. By 1800, Native Americans were taken from the Patwin settlement of Aguastos in the south-central area, and from other villages, by emissaries of Mission Dolores. In addition, missions San Jose and Sonoma actively proselytized the southern Patwin. Between the 1830s and 1840s, both Mexicans and Americans rapidly overtook the Patwin territory under the authority of the Mexican government.

The Spanish arrived on the central California coast in 1769, and by 1776 it had been explored by José Canizares. Gabriel Moraga crossed into the territory in 1808, and in 1813 a major battle was fought between the Miwok and the Spaniards near the mouth of the Cosumnes River. An epidemic, most likely malaria, raged through the Sacramento Valley in 1833, killing an estimated 75 percent of the native population. The discovery of gold in 1848 at Sutter's Mill, near the Nisenan village of Colluma (now Coloma) on the South Fork of the American River, drew thousands of miners into the area, and led to widespread killing and the virtual destruction of traditional Native American cultures.

4.18.1.3 Konkow

The Project area also falls within the ethnographic tribal territory of the Konkow, or Northwestern Maidu, in the Northern Sacramento Valley and surrounding foothills of the Sierra Nevada range. The Maidu, on the basis of cultural and linguistic differences, have been differentiated into three major related divisions: the Northeastern (Mountain Maidu), Northwestern (Konkow), and Southern (Nisenan).

The Maidu and Konkow languages and associated dialects are members of the Maiduan language family of the California Penutian Linguistic Stock. Unlike the Maidu whose dialects were unique to each of the four major regions of occupation, the Konkow spoke a large number of dialects, with each settlement area supporting more than one dialect.

The Konkow were observed by early ethnographers to occupy territory immediately adjacent to the southwest of the Mountain Maidu, along the Feather and Sacramento rivers, to their southern boundary at the Sutter Sacramentos. The Konkow were primarily located in the lower elevations of the Sierra Nevada and along the valley floor, in a climate characterized by a wet winter with occasional fog and freezing temperatures, and dry summer season. The habitat was savannah-like with grasses and oaks, and several village communities were noted: Kewsayoma'a, Yinomma'a, and Totoma'a. Most Konkow in the valley did not venture far from their homes into the neighboring territories.

The village community, the primary settlement type among the Maidu-Konkow, consisted of three to five small villages, each composed of about 35 members. Among the mountain Maidu, village communities were well defined, and based on geography. In contrast, the Konkow were dispersed throughout the valley floor along river canyons, and as a result, village communities were less concentrated or definable. In terms of permanent occupation sites, both groups preferred slightly elevated locations that provided visibility of the surrounding area and were away from the water-laden marshes and meadows. Konkow settlements along the Feather, Yuba, and American river canyons were situated high above the rivers on the ridges, or partway down the canyon side, mainly for defense purposes.

Subsistence and settlement strategies by the Konkow at the time of contact were noted by ethnographers to be similar to other groups in the region. The Konkow followed a yearly gathering cycle. They journeyed away from their winter river dwellings into the mountains during summer for hunting deer meat to dry, and into the valleys during the spring to collect grass seeds and wild rye. Their summer camps had temporary circular brush enclosures with no roof and a fireplace in the center, each of which housed three to four families and was also used for ceremonies.

Ethnographic records collected at contact indicate the Konkow were on peaceful terms with most of the surrounding tribes, but feuds were known to have occurred with the Yana to the north.

Peaceful alliances and reciprocal trade were more common than war and conflict among the Konkow based on ethnographic evidence. Konkow procured salmon, pine nuts, and shell beads from neighboring tribes. They procured abalone shells from the Wintuans, which were used for ear ornaments or necklace pendants. They also traded a form of currency of standard clam shell disk shaped bead or strings of these beads.

Contact between the Konkow and Western Culture was initiated as early as 1808 by Spanish explorers and fur trappers. The effects of the introduction of new diseases notwithstanding, native cultures remained essentially unchanged until after the discovery of Gold at Coloma in 1848. An outbreak of malaria in 1833, in concert with the 1848 Gold Rush and subsequent massacre of Native Americans, resulted in an upset of the ecological and social balance of local Native societies. As a direct result, aboriginal populations declined from 8,000 in 1846 to only 900 in 1910.

In 1855, the U.S. Congress authorized treaties to set aside reservation lands for Native Americans, and as a result, some Konkow were relocated to the Nome Lackee reservation in present-day Tehama County.

Currently, descendants of the Maidu and Konkow have revitalized their ancestral heritage and have dissociated into the Enterprise, Berry Creek, and Mooretown rancherias in Oroville; the Chico Rancheria in Chico (Mechoopda Indians, a Konkow subgroup); the United Maidu Nation and Susanville Rancheria in Susanville; and the Greenville Rancheria in Plumas County.

4.18.2 Tribal Consultation

In addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) on October 24, 2022 to request a search of the Sacred Lands File for the APE. The search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the project area.

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. On December 14, 2022, the City sent notification letters to the following Native American

tribes: the Ione Band of Miwok Indians, the Torres Martinez Desert Cahuilla Indians, and the United Auburn Indian Community of the Auburn Rancheria. At the time of publication of the IS/MND, the city had not received any responses from the tribes.

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

No known cultural resources or significant archaeological resources have been identified within the Project area. The Site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. However, unanticipated, and accidental discovery of California Native American tribal cultural resources are possible during project implementation, especially during excavation, and have the potential to impact unique cultural resources. As such, mitigation measure CUL-1 has 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 measure CUL-1.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

Water supply for domestic water service and fire flow is supplied from five wells owned and operated by the City. According to the City of Live Oak 2030 General Plan, the City has a 1.4-million-gallon ground level storage tank with a 4,200-gpm reliable capacity booster pump station. The water demand and water production has decreased after meters were installed on all water services in 2006. The water production in 2007 was 1,492 acre-feet. The annual average demand was 1,015 gpm, and the maximum day plus fire flow demand was 6,769 gpm. The City's wells reliably produce 5,855 gpm. Future development anticipated under the General Plan will require additional water. The City General Plan Policy A.4 aims to coordinate the provision of services, such as water, sewer, drainage, and law enforcement and fire protection to those areas where development is planned and take the steps to ensure the public facilities are made available to meet the expected housing growth.

The original 2030 General Plan EIR analysis concluded that the City would need to provide additional water supplies to meet the demand that would be created by buildout of the 2030 General Plan. However, by adhering to the General Plan policies, the City of Live Oak would reduce its overall water demand using conservation measures. Although water demand would increase substantially over current levels, the City's total water demand in 2030 would be roughly 0.4 percent of the East Butte Subbasin's total storage capacity. There has not been substantial decrease in groundwater levels that would suggest long-term water supply will be a substantial issue in the region (Live Oak 2010a).

4.19.1.2 Wastewater

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

The City was incorporated in 1947 and the first centralized wastewater collection and treatment facilities were constructed in 1952. The original collection system consisted of approximately 41,632 feet of vitrified clay pipe (VCP) with hand-packed joints. Since this time the City has experienced problems with excessive inflow and infiltration (I&I) due mostly to the original construction methods utilized and a relatively high ground water level. The City has completed numerous projects to expand and improve the collection system. Major improvements to the collection system since 1952 are included below (Live Oak 2017).

Between 1952 and 1985

Approximately 19,868 feet of VCP and polyvinyl chloride (PVC) pipe was added to the collection system. A sewer lift station was installed on Pennington Road east of Orchard Way (Pennington Lift Station). The lift station collects wastewater from parcels east of the Live Oak Slough and pumps a short distance west of the slough into the existing gravity collection system. A sewer lift station was installed at the intersection of P Street and Date Street (P Street Lift Station) with a 10-inch ductile iron force main installed from the lift station to the wastewater treatment plant to replace the existing outfall pipe. The existing outfall pipe had been identified as a major cause of I&I. A rehabilitation project was performed on the collection

system to repair deficiencies found in the 1975/1976 study. The project included raising manholes and cleanouts, sealing manholes and leaking collector pipes, and repairing broken collector pipes. A comminutor or grinder, used to reduce wastewater particle size, and emergency generator were installed at the P. Street Lift Station.

Between 1985 and 1999

Approximately 30,200 feet of VCP and PVC pipe was added to the collection system. A study was completed which included performing smoke tests and a video survey of the collection system to identify defective areas requiring repairs. The study resulted in the City performing a rehabilitation project the same year that repaired defective service connections, cleanouts, collector pipes, and sealed the entire original collection system with chemical grout. A lift station was installed on Ash Street (Ash Street Lift Station) and new force main pipes were installed from the Ash Street Lift Station and the P Street Lift Station to the wastewater treatment plant. In addition, the P Street Lift Station comminutor was removed and the original pumps were replaced with higher efficiency pumps. A lift station was installed as part of the Peachtree Subdivision to service the new development (Peachtree Lift Station). A 10-inch force main was installed from the new lift station to an existing 10-inch force main on Treatment Plant Road.

Between 1999 and 2009

Approximately 33,345 feet of mostly PVC pipe was added to the collection system. The original sanitary sewer main on L Street from Archer Avenue to Ash Street and on Ash Street from the Ash Street Lift Station to L Street was replaced and redirected to flow south and west to the Ash Street Lift Station. The new sewer collector rerouted wastewater from K Street (south of Fir Street), a portion of Elm Street, Butte Court, Archer Avenue, a portion of L Street, Birch Street, Ash Street, Belle Street, Staci Drive, Leslie Court, and Anita Drive. This improvement diverted wastewater from existing collector pipes identified to have capacity issues. At the P Street Lift Station the Parshall Flume was removed. Additionally, portions of the 1952 collection system on Kola Street from Larkin Road to N Street and approximately 93 feet along N Street were replaced with PVC pipe. A new lift station was installed at the intersection of Kola Street and N Street (Kola Street Lift Station) and a 16-inch PVC force main was constructed to the wastewater treatment facility. These improvements diverted a significant amount of wastewater from the existing P Street and Ash Street Lift Stations and have capacity in the downstream gravity collection system. A sewer lift station was installed at the intersection of Musgrave Avenue and Collier Avenue (Musgrave Lift Station) including a 6-inch PVC force main as part of the Pennington Ranch Unit No. 1 subdivision. This lift station is designed to serve all future phases of the Pennington Ranch development. The force main connects to the existing 16-inch force main near the treatment plant headworks. As part of the Premier Meadows subdivision development, approximately 3,198 feet of 12-inch PVC pipe was installed on Larkin Road from Kola Street to the northern limit of the subdivision.

2011 to 2015

Approximately 10,000 feet of PVC pipe was added to the collection system. A sewer lift station was installed at the intersection of Pennington Road and Luther Road with a short 6-inch PVC force main pumping to the existing gravity collection system at Pennington Road and Richard Avenue as part of the Garden Glen subdivision.

The sanitary sewer system operated and maintained by the City serves a population of approximately 8,500 people within a 3.1 square mile service area. The system consists of approximately 25.6 miles of gravity sewers, 500 manholes, six pump stations, and 4.9 miles of sanitary sewer force mains. There are about 2,600 privately owned sewer laterals, approximately 27 miles, connecting to the city system.

To date, the City has been proactive in identifying and replacing problem areas within the sanitary sewer system. The current Wastewater Collection System Master Plan, dated October 2009, provided the City with a study of the entire collection system. This study identified two recommended improvements to the collection system to be implemented with the addition of infill development that would impact the identified sections of the collection system. The recommended projects included:

- Upsize existing mains in Pear, N, Apricot and P Streets to 12-inches along a path from Albert and Pear Streets to the P Street Lift Station.
- Upsize existing mains in Kola and N Streets to 10-inches along a path from Kola and O Streets to the Kola Street Lift Station.

In 2002, the City completed upgrades to the wastewater treatment plant which incorporated many of the improvements recommended by the previous 1999 Wastewater Master Plan. Subsequently, the City received a new cease and desist order for the upgraded treatment plant. Construction of another larger treatment plant upgrade project was completed in 2012 (Live Oak 2017).

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. The City has an AutoCAD storm drain map which provides the approximate location of manholes, drop inlets, storm drain pipes (size included), ditches, pumping stations, force mains, and detention basins. 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. Where curb, gutter and drop inlets are missing, drainage occurs by gravity flow to the lowest points along the street system and adjacent parcels.

The City owns and maintains storm drain pipe systems, detention basins, and pump stations to provide drainage and prevent flooding within the City and convey runoff to the RD 777 open channel drainage system. The existing City and most of the City at buildout of the 2030 General Plan are within the RD 777 service area. RD 777's facilities consist of a series of drainage channels along with culverts and some piping. RD 777's system conveys flows to the south and west to the East Interceptor Canal and then to the Wadsworth Canal. The Wadsworth Canal flows to the Sutter Bypass, which in turn flows to the Sacramento River.

At buildout of the City of Live Oak 2030 General Plan, the northwest corner of the City will be within RD 2056 service area. This area drains to the west into Morrison Slough. Morrison Slough also drains to the south and west into the East Interceptor Canal and then to Wadsworth Canal, the Sutter Bypass, and ultimately to the Sacramento River (Live Oak 2011).

4.19.1.4 Solid Waste

The City of Live Oak contracts with the Yuba/Sutter Regional Waste Management Authority (RWMA) and Recology Yuba-Sutter for trash and recycling services, including roll-off boxes. Recology offers solid waste, organic waste, and hazardous waste services to both residential and commercial entities. Recology Yuba-Sutter (formerly Yuba-Sutter Disposal, Inc.) is the recycling and waste hauler serving the Cities of Live Oak, Marysville, Wheatland, Yuba City and the Counties of Yuba and Sutter. Recology Yuba-Sutter and its sister companies operate the Marysville Transfer Station and Material Recovery Facility; Ponderosa Transfer Station; Ostrom Road Landfill; Recology Ostrom. Recology works closely with recent legislations passed in California to ensure sustainability goals are met (Yuba/Sutter RWMA 2022). Table 4.19-1 illustrates the amount of solid waste disposal in the Yuba/Sutter RWMA service area and the remaining capacities of the various landfills used by Yuba/Sutter RWMA between 2017 to 2019. No new solid waste or recycling facilities will be required to provide such services to the Proposed Project.

Table 4.19-1. Solid Waste Disposal Facilities Used by Yuba/Sutter RWMA

Destination Facility	Solid Waste Disposal (tons/year)			Landfill Information		
	2017	2018	2019	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Altamont Landfill & Resource Recovery	146	119	20	65,400,000	6/30/2016	12/1/2070
Anderson Landfill, Inc.	101	30	536	10,409,132	1/1/2015	1/1/2093
Azusa Land Reclamation Co. Landfill	8	11	3	51,512,201	9/30/2012	1/1/2045
Clean Harbors Buttonwillow LLC	0	7	51	-	-	1/1/2040
Fink Road Landfill	0	0	8	7,184,701	3/1/2017	12/1/2023
Foothill Sanitary Landfill	1	3	6	125,000,000	6/10/2010	12/31/2082
Forward Landfill, Inc.	161	228	113	24,720,669	1/31/2020	1/1/2036
L and D Landfill	198	120	152	3,115,900	7/2/2020	12/31/2030
Neal Road Recycling and Waste Facility	16	6	5	20,847,970	7/1/2009	1/1/2048
North County Landfill & Recycling Center	2	0	3	35,400,000	12/31/2009	12/31/2048
Potrero Hills Landfill	182	146	460	13,872,000	1/1/2006	2/14/2048
Recology Hay Road	790	396	589	30,433,000	7/28/2010	1/1/2077
Recology Ostrom Road LF Inc.	169,449	151,654	166,569	39,223,000	6/1/2007	12/31/2066

Sacramento County Landfill (Kiefer)	177	169	606	112,900,000	9/12/2005	1/1/2064
West Central Landfill	0	2	1	6,589,044	12/1/2013	3/1/2032
Western Regional Landfill	97	196	215	29,093,819	6/30/2005	1/1/2058
Yolo County Central Landfill	18	122	128	33,544,909	6/1/2021	2/21/2124
Yearly Total	171,346	153,208	169,464			
Average per Resident (lbs/day)	1.00	0.85	0.94			

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

4.19.1.5 Electricity

Pacific Gas and Electric (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.

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.

Water

The Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station would not result in the need for additional water supplies or expanded water facilities as the Project is in and of itself an expansion of water facilities for the City. The Project would have no impact in this area.

Wastewater

The Project includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to

the onsite lift station would not result in the need for additional wastewater supplies or expanded wastewater facilities as the Project is in and of itself an expansion of wastewater facilities for the City. While the Project would add new wastewater facilities in the City, impacts from these improvements are discussed throughout this Initial Study. The Project would have no impact in this area.

Storm Drainage

Replacement of existing wastewater pipelines, infilling or installing a temporary crossing over the onsite drainage ditch, and improvements to the city's lift station would not result in the need for additional storm drainage facilities. While the Project would add new storm drainage facilities in the city, impacts from these improvements are discussed throughout this Initial Study. The Project would have a less than significant impact on storm drainage facilities in the city.

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.

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.

Telecommunications

Telecommunication will be 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 and lift station improvements. 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) 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 (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents), and topography (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 includes the demolition and partial replacement of underground drainage and wastewater facilities, the installation of a box culvert within the onsite drainage ditch, and various improvements to the onsite lift station. 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?	☐	☒	☐	☐

As discussed in *Sections 4.4 Biological Resources* and *4.5 Cultural Resources*, the Proposed Project would have potential impacts to these resources. However, with implementation of mitigation measures proposed in the relevant sections of this Initial Study, 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)?	☐	☒	☐	☐

Implementation of the Proposed Project, in conjunction with other approved or pending projects in the region, has the potential to result in cumulatively considerable impacts to the physical environment. However, with implementation of mitigation measures proposed in the relevant subsections of this Initial Study, 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?	☐	☐	☒	☐

The Proposed Project is the replacement of existing wastewater pipelines and a lift station. The Proposed Project would not result in direct and indirect impacts to human beings.

5 COMPLIANCE WITH FEDERAL REGULATIONS

The City is seeking funding for the proposed Project under the CWSRF Program, which is partially funded through the EPA. Because of the federal nexus with the EPA, 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 Federal Regulations Evaluation

5.1.1 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 Clean Air Act (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 National Ambient Air Quality Standards (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.

Predicted annual construction-generated emissions for the Proposed Project are summarized in *Table 4.1.1*. 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.

5.1.2 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.

5.1.3 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 Live Oak, 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.

5.1.4 Endangered Species Act

The Endangered Species Act (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 listed species was identified from the Project region: Swainson's hawk; however, mitigation measures 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.

5.1.5 Environmental Justice

In 1994, President Clinton issued the Executive Order (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 2021-2029 Housing Element provides race/ethnicity and income information in the city based on the U.S. Census 2019 American Community Survey. Table 5.5-1 shows Year 2019 minority and low-income population percentages for the affected local and regional areas.

Table 5.5-1. Year 2019 Minority Population Percentages for the Affected Local and Regional Areas

Jurisdiction	Minority Population Percentage
City of Live Oak	62.2
Sutter County	53.8

Source: City of Live Oak 2021c

As shown, the City of Live Oak' minority population is greater than 50 percent, and 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 Tribal Cultural Resources 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 ½ 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.

5.1.6 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. As such, the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

5.1.7 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 Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps are used to determine if properties are located within Special Flood Hazard Areas. As explained in Section 4.10 (Hydrology and Water Quality), the Project is located within a 100-year flood hazard area (FEMA 1984). All Project improvements would be underground with the exception of the improvements to the lift station. 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.

5.1.8 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 (that is, 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 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 (Cultural Resources), the Cultural Resources Inventory and Evaluation Report completed by ECORP Consulting (2022b), 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 the Project are proposed and in the case of the current project, equals the Project Area subject to environmental review under NEPA. This includes areas proposed for sewer line replacement,

abandonment of existing storm drainage, curb, gutter and street improvements, and possible box culvert and wing wall installation. It measures approximately 234 feet east-west and 115 feet north-south.

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 includes excavations for the new sewer line, box culvert, and wing wall excavations. It could extend as deep as 12 feet below the current surface, and 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. The above-surface vertical APE for this Project is assumed to be approximately 20 feet, which represents the height of the lift station improvements.

Previous researchers have conducted 24 previous cultural resource investigations in or within 1 mile of the property, covering approximately 100 percent of the total area surrounding the property within the records search radius (Table 4.5.1). There was one study conducted within the Project Area and the other 23 were within the 1-mile radius. The previous studies were conducted between 1977 and 2018. These studies revealed the presence of historic sites associated with the Sacramento Railroad, Live Oak Commercial District, historic structures, Live Oak Cemetery, and Live Oak Wastewater Treatment Plant.

The records search and the 2022 field survey resulted in the documentation of two historic-era cultural resources in the Project Area. The historic-era ditch (LO-01) and roads (LO-02 and LO-03) underwent evaluation using NRHP and CRHR eligibility criteria and were found to not be eligible for either register.

5.1.9 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 § 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 over 115 miles inland and would not affect any fisheries or EFH. The MSA does not apply to the Project.

5.1.10 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (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 (Biological Resources), birds protected under the MBTA could nest within roadside trees and within landscape vegetation adjacent to the site. Mitigation measure BIO-2- Nesting Bird Work Window requires that ground-disturbing and vegetation-disturbing work be completed during the non-nesting season to avoid impacts to nesting birds. If this is determined to be infeasible, mitigation measure BIO-3- Nesting Bird Pre-construction Surveys requires a 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 measures BIO-2 and BIO-3 would ensure the Project does not violate the MBTA.

5.1.11 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 (Biological Resources), the Proposed Project is in an urbanized environment and does not contain federally protected wetland habitats as defined by Section 404 of the Clean Water Act. Based on the preliminary aquatic resources assessment, there are no aquatic resources, potential waters of the U.S. or state, present within the Study Area.

5.1.12 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 EPA 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, EPA 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 Live Oak within Sutter 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 (EPA 2022). Therefore, the SDWA does not apply to the Project.

5.1.13 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 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.

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6 ALTERNATIVES

While an alternatives analysis is not generally required for IS/MNDs, the SWRCB's Clean Water State Revolving Fund (CWSRF) Program requires an environmental alternative analysis for projects that have a Negative Declaration, Mitigated Negative Declaration. 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 alternative Project 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 pipeline lift station and add a back-up generator for the lift station.
2) Replace outdated, undersized, and substandard critical infrastructure, allowing the City to reliably convey wastewater to treatment facilities.
3) Improve the wastewater conveyance on Date Street 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 Alternate Site Alternative

An alternative with new wastewater pipeline, storm drainage pipeline and improvements to the lift station on an alternate site was considered but rejected for a number of reasons: an alternative location would not repair an existing deteriorating condition, an alternative location would increase the potential for environmental impacts over the existing Site as the new location would be in an area of undisturbed land,

and a new location would increase the cost of implementation as new additional connection to the existing infrastructure would be necessary.

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 and the lift station will most likely fail at some point, resulting in sanitary sewer overflow.

6.2.3 Analysis of Alternatives

The Project alternative is 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 the Alternative Project. *Table 6.0-2* compares the alternative Project to the basic Project objectives. Alternative 1: No Project was found to be the only viable Project Alternative to analyze and compare to the Proposed Project as without all Project components included into an Alternative, there would be no adequate Alternative that could be considered a Project that meets parts of or all of the Project objectives.

6.2.3.1 Alternative 1: No Project

Under the No Project, 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 lift station.

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, storm drainage facilities, or upgrades to the lift station 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 and would exceed applicable air quality thresholds for NO_x. However, implementation of mitigation measure AQ-1 would reduce NO_x emissions to a less than significant level. The Project would not generate air emissions during construction that would exceed all other exceed applicable air quality thresholds, would not result in TAC impacts, and would 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-6 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, implementation of mitigation measure CUL-1 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., the Proposed Project would result in potential impacts to unknown paleontological resources. However, as defined in the Section 4.7, implementation of 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 paleontological impacts. As such, the potential impacts to paleontological 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 geology, soils and paleontological resources.

Greenhouse Gases and Climate Change

As discussed in Section 4.8, the Proposed Project's GHG emissions were determined to be less than significant as no GHG thresholds have been established for the SCAQMD and the Project would not produce large amounts of GHG emissions.

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 Live Oak 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

The Proposed Project will create noise during construction of the new facilities. However, Chapter 9.40, *Noise Regulation*, of the City's Municipal Code prohibits any person from operating any tools or equipment used in construction, drilling, repair, alteration, or demolition work between the hours of 7:00 pm and 6:00 am on weekdays and Saturdays, and anytime on Sundays. 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 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 measure **CUL-1** 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.

6.3 Environmentally Superior Alternative

Table 6.0-1 summarizes the potential impacts of the alternatives evaluated in this section, as compared with the potential impacts of the Proposed Project. Table 6.0-2 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. CEQA requires that when the environmentally superior is the No Project Alternative, another alternative must be identified as the environmentally superior alternative [CEQA Guidelines section 15126.6(e)(2)]. However, since no other alternatives are feasible to satisfy the City's need for improvements to the lift station and pipeline replacement, the No Project Alternative is the only available alternative.

The Proposed Project has three objectives. Table 6.0-2 illustrates a comparison of the alternative Project to the basic project objectives. As shown in this table, Alternative 1 does not 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 of impacts. While Alternative 1 would have less or equal impact to the environment for the majority of issue areas when compared to the Proposed Project, the impact to utilities would be greater. Moreover, because Alternative 1 does not meet any or the majority of the objectives for the Project, and the Project's impacts could be mitigated to a less than significant level, the environmentally superior alternative would be the Proposed Project.

Table 6.0-1. Alternative Project Impacts Comparison

Environmental Issue Area	Proposed Project Impact Finding (Mitigated)	Alternative 1
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	+

Table 6.0-1. Alternative Project Impacts Comparison		
Environmental Issue Area	**Proposed Project Impact Finding (Mitigated)**	**Alternative 1**
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		+

+ Alternative is environmentally superior, impacts are less than those of the Proposed Project,
- Alternative is environmentally inferior, impacts are greater than those of the Proposed Project,
= Alternative is environmentally the same, impacts similar to those of the Proposed Project, or no better or worse

Table 6.0-2. Comparison Project Objectives and Alternative	
Objective	**Alternative 1**
Replacement of existing wastewater pipeline lift station and add a backup generator, wet well, pump, valves, piping, flowmeter, vaults, perimeter CMU wall, electrical controls, new roof, Site paving, new box culvert in onsite drainage ditch.	-
Replace outdated, undersized, and substandard critical infrastructure, allowing the City to reliably convey wastewater to treatment facilities.	-
Improve the wastewater conveyance in the City, in a cost-effective manner with minimal disruption of service, in order to have facility capacities for the projected population increase in the City of Live Oak.	-

= Meets project objective
- Does not meet project objective

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