Draft

CEQA Plus Initial Study and Mitigated Negative Declaration

Stirling City Sewer Rehabilitation Planning Project

April 2020

Lead Agency:

Butte County Department of Public Works
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Oroville, California 95965

Prepared by:

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DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION WATERLINE REPLACEMENT PROJECT

Lead Agency: Butte County Department of Public Works

Project Proponent: Butte County Department of Public Works

Project Location: The Project area is located in the Butte County in the community of Stirling City. As illustrated in *Figure 1. Regional Location* and *Figure 2. Site Location* maps, the Proposed Project, the rehabilitation of the wastewater collection system, will occur between Gypsum Street and approximately 100 feet past Diamond Street, parallel to Skyway Road. The new pipeline will extend 2,700 linear feet along an unpaved alley. The rehabilitation will occur within the existing sewer pipeline right-of-way, which is confined to an unpaved alleyway in the community. The pipeline right-of-way is located adjacent to homes in the community. The pipeline will be located underground and manholes will be installed at grade within the right-of-way. The approximate center of the site is located at latitude 39°54'30.4"N and longitude 121°31'48.1"W. The Project is located in Section 28 of Township 24 North, Range 4 East, M.D.B.&M.

Project Description: The Project is the rehabilitation of a portion of the wastewater collection system under the authority of County Service Area (CSA) 82, Stirling City Sewer System. Replacement and repair of portions of the system has been completed in the past, but further rehabilitation is needed. Approximately 2,700 linear feet of the original 5,500-foot clay pipe wastewater collection system needs replacement. The Project will also include the replacement of 12 existing manholes with nine standard 48-inch manholes and the installation of 83 new laterals (approximately ten linear feet each, up to the new sewer cleanouts). Known deficiencies determined by the County include aging pipe, lack of standard manholes for proper system maintenance, possible root intrusion and infiltration and inflow due to disjointed piping. All construction will occur within the existing pipeline right-of-way under unpaved alleys and roads throughout the small community.

The Proposed Project will:

- replace the existing 12 manholes with nine standard 48-inch precast concrete sewer manholes
- replace the existing 8-inch clay sewer mains with 8-inch polyvinyl chloride (PVC) sewer mains

- re-establish existing active sewer lateral connections to the proposed sewer main

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

BIO-1: Implement a nesting bird work window to avoid disturbance of nesting birds. All ground disturbing and vegetation disturbing work shall be completed during the non-nesting season between the dates of September 1 through January 31. Construction activities are prohibited during the nesting season of February 1-August 31.

Timing/Implementation: *During construction activities*

Monitoring/Enforcement: *Butte County and the Project construction lead*

BIO-2: If **BIO-1** is determined infeasible, a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable habitat on the Project site no more than fourteen days prior to the commencement of construction during the nesting season (February 1-August 31). Surveys shall be conducted within 100 feet of all area to be disturbed by the Project. If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a biologist in consultation with CDFW or the CEQA lead agency. Active nests should be monitored, and the buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

Timing/Implementation: *Survey no more than 14 days prior to the commencement of Project construction activity and monitor nests during construction.*

Monitoring/Enforcement: *Butte County and the Project construction lead*

CUL-1: If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the SWRCB, County, and applicable landowner. 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. 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, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to their satisfaction.

- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Butte 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: *Butte County and the Project construction lead*

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 Butte County. The County 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 County 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: *Butte County and the Project construction lead*

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CONTENTS

SUMMARY S-1

Mitigation Measures Incorporated into the Project to Avoid Significant Effects S-1

1.0 BACKGROUND 1-1

1.1 Introduction 1-1

1.2 Environmental Setting 1-2

2.0 PROJECT DESCRIPTION 2-1

2.1 Project Characteristics 2-1

2.2 Regulatory Requirements, Permits, and Approvals 2-2

2.3 Relationship of Project to Other Plans and Projects 2-3

2.4 Consultation with California Native American Tribe(s) 2-3

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION 3-1

3.1 Environmental Factors Potentially Affected 3-1

4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION 4-1

4.1 Aesthetics 4-1

4.2 Agriculture and Forestry Resources 4-4

4.3 Air Quality 4-6

4.4 Biological Resources 4-14

4.5 Cultural Resources 4-20

4.6 Energy 4-30

4.7 Geology and Soils 4-32

4.8 Greenhouse Gas Emissions 4-39

4.9 Hazards and Hazardous Materials 4-41

4.10 Hydrology and Water Quality 4-45

4.11 Land Use and Planning 4-51

4.12 Mineral Resources 4-52

4.13 Noise 4-53

4.14 Population and Housing 4-60

4.15 Public Services 4-61

4.16 Recreation 4-63

4.17 Transportation 4-64

4.18 Tribal Cultural Resources 4-67

4.19 Utilities and Service Systems 4-70

4.20 Wildfire 4-75

4.21 Mandatory Findings of Significance 4-77

5.0 COMPLIANCE WITH FEDERAL REGULATIONS 5-1
5.1 Clean Air Act 5-1
5.2 Coastal Barriers Resources Act 5-2
5.3 Coastal Zone Management Act 5-2
5.4 Endangered Species Act 5-2
5.5 Environmental Justice 5-3
5.6 Farmland Protection Policy Act 5-4
5.7 Flood Plain Management 5-4
5.8 National Historic Preservation Act 5-4
5.9 Magnuson-Stevens Fishery Conservation and Management Act 5-6
5.10 Migratory Bird Treaty Act 5-7
5.11 Protection of Wetlands 5-7
5.12 Safe Drinking Water Act, Sole Source Aquifer Protection 5-7
5.13 Wild and Scenic Rivers Act 5-8
6.0 ALTERNATIVES 6-1
6.1 Introduction 6-1
6.2 Alternatives Descriptions and Analysis 6-3
6.3 Environmentally Superior Alternative 6-8
7.0. LIST OF PREPARERS 7-1
8.0 BIBLIOGRAPHY 8-1

APPENDICES

Appendix A – Air Quality and Greenhouse Gas Assessment (ECORP Consulting, Inc. February 12, 2020)

Appendix B – Biological Resources Assessment (ECORP Consulting, Inc., January 2020)

Appendix C – Noise Impact Memorandum (ECORP Consulting, Inc., February 14, 2020)

LIST OF TABLES

Table 4.3-1. Criteria Air Pollutants- Summary of Common Sources and Effects 4-7
Table 4.3-2. Construction-Related Emissions 4-10
Table 4.3-3. Construction-related Emissions (EPA Conformity Determination Analysis) 4-11
Table 4.5-1. Resources within the Project Area 4-27
Table 4.6-1. Electricity Consumption in Butte County 2014-2018 4-30
Table 4.6-2. Automotive Fuel Consumption in Butte County 2015-2019 4-31
Table 4.7-1. Project Area Soil Characteristics 4-33

Table 4.8-1. Construction-Related Greenhouse Gas Emissions....4-40

Table 4.13-1. Typical Construction Equipment Noise Levels....4-57

Table 4.13-2. Vibration Source Amplitudes for Construction Equipment....4-59

Table 4.19-1. Solid Waste Disposal Facilities Used by the Butte Regional Waste Management Authority....4-72

Table 5.1-1. Construction-related Emissions (EPA Conformity Determination Analysis).... 5-2

Table 5.1-2. Year 2017 Minority and Low-Income Population Percentages for the Affected Local and Regional Areas.... 5-3

Table 6.0-1. Alternatives Impacts Comparison.... 6-9

Table 6.0-2. Comparison of Alternatives by Project Objectives....6-10

LIST OF FIGURES

Figure 1. Regional Location.... 1-3

Figure 2. Project Location.... 1-4

Figure 3. Project Site Plan.... 2-5

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AD	Anno Domini
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
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

LIST OF ACRONYMS AND ABBREVIATIONS

CH_4	Methane
CHRIS	California Historical Resources Information System
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	Butte County
CRHR	California Register of Historic Places
CWA	Federal Clean Water Act
DMR	Division of Mine Reclamation
DOC	California Department of Conservation
DOF	Department of Finance
AMSL	Above mean sea level
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
fc	Foot-candle
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
General Permit	General Construction Activity Stormwater Permit
GHGs	Greenhouse Gases
GLO	General Land Office
L_{dn}	Day-night average sound level
L_{eq}	Equivalent continuous sound level
LOS	Level of service
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
NAHC	Native American Heritage Commission
NEIC	North Central Information Center
NHPA	National Historic Preservation Act
NOI	Notice of Intent

LIST OF ACRONYMS AND ABBREVIATIONS

NO_x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
OHP	California Office of Historic Preservation
PM_{10} and $PM_{2.5}$	Particulate Matter
PRC	Public Resource Code
Project/ Proposed Project	Stirling City Sewer Rehabilitation Planning Project
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
BCAQMD	Butte County Air Quality Management District
SO_2	sulfur dioxide
SR	State Route
SRA	Sensitive Receptor Area
SRA	state responsibility area
SRWP	Sacramento River Watershed Program
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
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled
WPCP	Water Pollution Control Program

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1.0 BACKGROUND

Summary

Project Title:	Stirling City Sewer Rehabilitation Planning Project
Lead Agency Name and Address:	Butte County Butte County Public Works 7 County Center Dr., Oroville, California 95965
Lead Agency Contact Person and Phone Number:	Eric Schroth, P.E., L.S. (530) 538-7266
Project Owner	Butte County
Project Location:	The Project area is located in the community of Stirling City. The proposed pipeline will follow the route of the existing pipeline which is located in the alley between Skyway and Manzanita Street. The Project will run parallel to Skyway for 2,700 linear feet, between Gypsum Street and approximately 100 feet past Diamond Street (*Figure 1. Regional Location* and *Figure 2 Site Location*). The Project is located in Section 28 of Township 24 North, Range 4 East, M.D.B.&M. The approximate center of the site is located at latitude 39°54'30.4"N and longitude 121°31'48.1"W.
General Plan Designation:	Medium Density Residential (up to 6 du/acre)
Zoning:	None, within an existing alleyway

1.1 Introduction

Butte County Department of Public Works is the Lead Agency for this Initial Study and Mitigated Negative Declaration (IS/MND). The IS/MND has been prepared to identify and assess the anticipated environmental impacts of the sewer rehabilitation 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) is generally used to determine which CEQA document is appropriate for a Project (Negative

Declaration, Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]). In this instance, the IS and MND have been prepared as one document.

The County is seeking funding for the Proposed Project under the State Water Resources Control Board's (SWRCB's) Clean Water State Revolving Fund, Small Community Wastewater Program (SCWP) Program. The Clean Water Act (CWA) provides for the creation of a CWSRF Program capitalized by federal and state funds. The CWA authorizes financial assistance through loans and other financing mechanisms for a wide variety of pollution control efforts designed to meet the goals of the CWA. The CWSRF is intended to provide financial assistance in perpetuity using state and federal funds.

Because of the federal nexus through funding, projects seeking funding through the SCWP Program are subject to federal laws and regulations (e.g., federal "cross-cutters"). Under the SCWP 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 sewer rehabilitation 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.

1.1.1 Project Location and Surrounding Land Uses

The Project area is located in community of Stirling City in Butte County. Stirling City is a small community; approximately 1.18 square miles in size. As illustrated in *Figure 1. Regional Location* and *Figure 2. Project Location* maps, the Proposed Project involves the majority of the community area. The rehabilitation of the wastewater collection system will occur on 2,700 linear feet of area in the community. The rehabilitation will occur within the existing sewer pipeline right-of-way, which is confined to an unpaved alley and six street crossings in the community. The pipeline will be located below ground level and the manholes at street level. The Project site is confined to an area between Skyway and Manzanita Road and runs from Gypsum Street to approximately 100 feet past Diamond Street.

Adjacent and surrounding uses include single-family homes, Horace L. Brakebill School, commercial uses, and timber land.

1.2 Environmental Setting

Stirling City is located along Skyway in the northeastern portion of Butte County. Butte County is located in the northern portion of the Sacramento Valley. Stirling City is located approximately 11 miles northeast of the Town of Paradise and approximately seven miles northeast of the community of Magalia. Other nearby communities along Skyway include Lovelock and Inskip.

The Project area in Stirling City has one use designation under the Butte County General Plan: Medium Density Residential (up to 6 du/acre). Stirling City is characterized by residential and rural development surrounded by many acres of forest and timberland. Stirling City is a small community with a population of approximately 200-300.

The Project site is relatively flat, with elevations ranging from 3,515 to 3,650 feet above mean sea level (AMSL) over the approximately 2,700-foot-long, 20-foot-wide (54,000 square foot) Project site.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Regional Location
Stirling City Sewer Rehabilitation Project



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Project Location

Stirling City Sewer Rehabilitation Project

2.0 PROJECT DESCRIPTION

2.1 Project Characteristics

The Project is the replacement of the remaining deteriorated portion of a 5,500-foot long clay wastewater conveyance pipeline in Stirling City, California. The system undergoing replacement was originally constructed in the 1940s and early 1950s and since completion of construction, portions of the system have undergone rehabilitation. The County began rehabilitating the lower portion of the pipeline by utilizing County Service Area 82 (CSA) funding. The previously completed rehabilitation primarily includes replacement of clay pipes with new pipes and replacement of the septic tanks located near the wastewater treatment pond. However, due to a lack of funding in the past, the 2,700 feet of remaining clay pipeline now need to be replaced. The Proposed Project aims to complete the rehabilitation of the wastewater conveyance system.

With the Proposed Project, approximately 2,700 linear feet of an 8-inch sewer main and approximately 900 linear feet of 4-inch laterals (comprised of 83 laterals at an approximate length of 10 linear feet each to new cleanouts) will be installed. The new pipeline will be composed of new polyvinyl chloride (PVC). Additionally, 12 existing manholes (used for sewer line access) will be removed, and 9 standard 48-inch manholes will be installed at a maximum spacing of 350 feet. Further, 83 new sewer cleanouts will be installed at each lateral within the right of way.

Open cut method will be used in shallow areas of the alignment, and vertical trenching with shoring will be used in the deeper sections.

In summary, the Proposed Project includes the following main components:

- The replacement of 12 existing 36-inch corrugated metal pipes set into the ground with steel plates covering the top, with nine standard 48-inch sanitary sewer precast manholes.
- The replacement of existing 8-inch clay sewer mains with 8-inch polyvinyl chloride (PVC) sewer mains.
- The re-establishment of existing active sewer lateral connections to the proposed sewer main.

2.1.1 Employees and Construction

Construction is anticipated to start in early spring of 2021 and continue for 22 weeks, or 100 working days. Construction is anticipated to be completed by a crew of four to six workers, including a foreman, operator, and between two and four laborers. All construction will occur within the existing alley right-of-way (ROW).

On average, the foreman's truck and laborer's truck would be used for 8 hours per day. A small to mid-sized excavator would be used for the trenching along the deeper portions of the alignment for approximately 8 hours per day when used. When trenching the shallower portions of the alignment, a backhoe will be used instead of the excavator on an average of 8 hours per day. Lastly, a Bobcat or skip loader will be used to bed and backfill the trenches for an average of 8 hours per day.

Open cut method will be used in shallow areas, and vertical trenching with shoring will be used in the deeper sections. The trenches created using the open cut method are anticipated to be between four and

20 feet deep and three feet wide, depending on existing pipeline locations. When backfilling the temporary trenches, pipe zone backfill shall be Class 2 Aggregate Base. Intermediate backfill will be native material with 95 percent relative compaction with no particles larger than three inches in maximum dimension. When there is trenching through a structural section, it shall be replaced in kind. The approximate amount of cut will be approximately 800 cubic yards and will be entirely comprised of trench excavation and manhole excavation. The fill amount is anticipated to be between 800 cubic yards and 1100 cubic yards, depending on whether or not underground spoils (soil, rock, and lubricants excavated using trenchless methods) are used. To minimize import and export, underground spoils will be used if they are suitable. If the spoils are not deemed suitable for use, approximately 300 cubic yards of native soil will be exported. If the spoils are not deemed suitable for use, approximately 300 cubic yards of native soil will be exported.[1] The existing sewer main currently maintains approximately 2 to 12 feet of cover and the new pipeline will likely remain within the same range of cover. Upon completion, the alley will remain unpaved.

2.2 Regulatory Requirements, Permits, and Approvals

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

2.2.1 Lead Agency Approval

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

Other agency approvals include the following:

State Water Resources Control Board (SWQCB)

Butte County (County) is requesting funding from the California State Water Resources Control Board (CSWRCB) Clean Water State Revolving Fund (CWSRF). The SWQCB must authorize approval of the final Project plan, schedule, and financial information prior to authorization of funding for the Project.

Central Valley Regional Water Quality Control Board (RWQCB)

The RWQCB typically requires that a Construction General Permit be obtained for projects that disturb more than one acre of soil. Typical conditions issued with such a permit include the submittal of and

[1] If export of fill material exceeds 50 cubic yards, Butte County regulations regarding grading and export of fill must be followed.

adherence to a stormwater pollution prevention plan (SWPPP), as well as prohibitions on the release of oils, grease, or other hazardous materials.

Butte County Air Quality Management District (BCAQMD)

The Proposed Project is located in an area under the jurisdiction of the BCAQMD. The Project applicant will 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 (BCAQMD 2019).

2.3 Relationship of Project to Other Plans and Projects

2.3.1 Butte County 2030 General Plan

The *Butte County 2030 General Plan* is the primary document governing land use development in unincorporated areas of Butte County, including Stirling City. The General Plan provides a governing basis for all plans and other planning documents of the County and all codes, ordinances, and policies of the County related to land use change, transportation, environmental resources, infrastructure, and other related topics. The General Plan consists of the following elements: Guiding Principles, About Butte County, Land Use Element, Housing Element, Economic Development Element, Agriculture Element, Water Resources Element, Circulation Element, Conservation and Open Space Element, Health and Safety Element, Public Facilities and Services Element, and the Areas and Neighborhood Plans Element. Each Element also has goals, policies, and implementation strategies to guide land use and development decisions in the future (Butte County 2018).

2.4 Consultation with California Native American Tribe(s)

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

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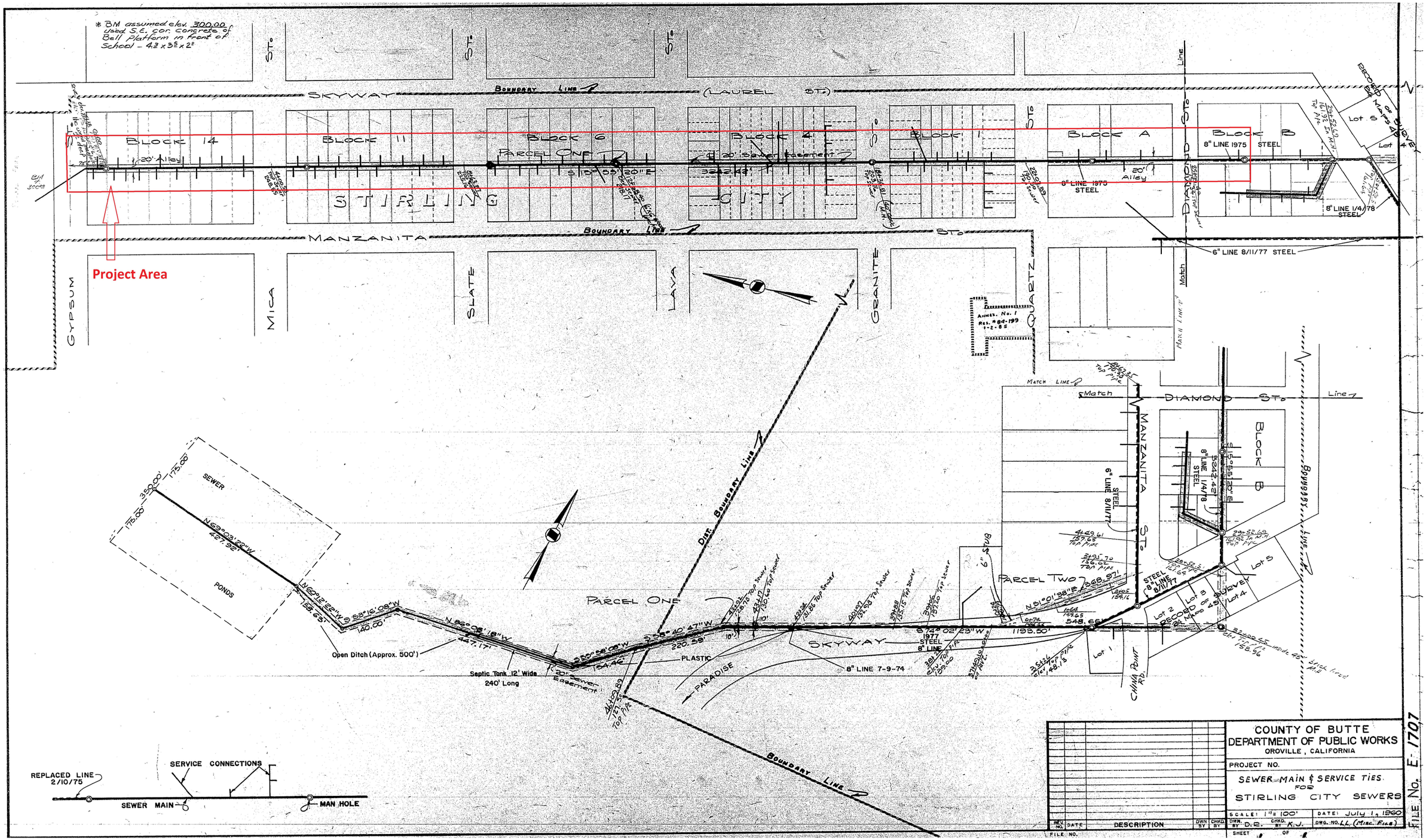

Figure 3. Project Site Plan

Stirling City Sewer Rehabilitation Project

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3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

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

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

3.1.1 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. ☐

Dennis Schmidt

Dennis Schmidt, Director
Butte County Public Works

4/10/2020

Date

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Stirling City is located in the northeastern portion of Butte County, east of the Sacramento River, in the northern portion of the Sacramento Valley (*Figure 1. Regional Location*). Stirling City is located approximately 11 miles northeast of the Town of Paradise and approximately 7 miles northeast of the community of Magalia. Other nearby communities along Skyway include Lovelock and Inskip. The natural scenery of Stirling City is characterized by views of open forest and views of the surrounding mountains.

The Project site encompasses approximately 2,700-foot-long, 20-foot-wide (54,000 square foot) Project site. The Project area includes light and moderate residential use; commercial use; park space; and timber and forest land. The Butte County General Plan does not specifically designate scenic vistas however, the General Plan does list several important scenic resources throughout Butte County and list visual resource goals, policies, and actions.

For analysis purposes, a visual resource can be discussed in terms of a foreground, middleground, and background viewshed. The middleground and background viewshed is often referred to as the broad viewshed. Examples of scenic vistas can include mountain ranges, valleys, ridgelines, or water bodies from a focal point of the forefront of the broad viewshed, such as visually important trees, rocks, or historic buildings. An impact would generally occur if the Project would change the view to the middleground or background elements of the broad viewshed, or remove the visually important trees, rocks, or historic buildings in the foreground.

Visual Character of the Project Site

The topography of the Project site is relatively flat, with elevations ranging from 3,515 to 3,650 feet above mean sea level (AMSL) over the Project site. The Project would involve the replacement of existing sewer pipeline and manholes throughout the majority of the developed area of the community. The new pipeline will be installed below ground, and the manholes will be installed at grade within the unpaved alley and road rights-of-way; where the outdated system currently exists. Visual character of the Project area varies from low density single-family homes to commercial use to open forest.

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. The California Scenic Highway Program has not officially designated any roadways in or adjacent to Stirling City as a scenic highway (Caltrans 2019).

Regulatory Policies

The Butte County 2030 General Plan identified the following goals, and policies relevant to aesthetics:

Goal COS-17: Maintain and enhance the quality of Butte County's scenic and visual resources.

Policy COS-P17.1 Views of Butte County's scenic resources, including water features, unique geologic features and wildlife habitat areas, shall be maintained.

Policy COS-P17.2 Ridgeline development near scenic resources shall be limited via the adoption of specific development guidelines in order to minimize visual impacts

Goal COS-18: Protect and enhance scenic areas adjacent to and visible from highways for enjoyment by residents and visitors.

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.

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 one 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.

[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.

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.

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 off-site glare.

4.1.3 Aesthetics (I) Environmental Checklist and Discussion

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

The *Butte County 2030 General Plan* identifies several scenic resources in the County, but as stated in the General Plan, the resources identified in the General Plan does not constitute an exclusive list. The Central Buttes and the Sacramento River and riparian corridor are among the scenic resources described in the General Plan. The General Plan includes goals and policies related to scenic resource preservation as outlined in Section 4.1.1 above.

The Project would involve the replacement and repair of a sewage pipeline and related infrastructure at or below ground level. The location of the pipeline would remain unchanged from its existing location. As such, the Project would have no impact on scenic vistas.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

The Project is not located within the vicinity of an officially designated scenic highway. No impact would occur.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒

The Project is the replacement of the existing 8-inch sewer main below ground level and the replacement of existing manholes at grade with 48-inch standard precast standard manholes. Most Project improvements would be completed underground. Upon completion of the Project, the only visual indication that this improvement has been done would be the new manhole covers in the unpaved alley and street right-of-way. Currently, rusted rectangular and circular steel covers are used to cover the manholes. The proposed improvements would not conflict with applicable zoning or other regulations governing scenic quality in Butte County (Butte County 2018). Therefore, the Project would have no impact in this area.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

The Project is the replacement of wastewater pipelines and repair of the wastewater system at or below ground level. 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 California DOC manages an interactive website, the California Important Farmland Finder. This website program identifies the Project site as being within an area of Urban and Built-Up Land (DOC 2019a).

This site is not identified as being under a Williamson Act contract (DOC 2016). No farming activities existing on the site or within the general area of the Project.

The Project site is within Stirling City. Although Stirling City is surrounded by forest land, the community itself, including the Project area, is designated as Urban and Built Up Land by the Department of Conservation (DOC) (DOC 2019a).

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?	☐	☐	☐	☒

The DOC identifies the entirety of Stirling City, including the Project site, as Urban and Built-Up Land (DOC 2019a). 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?	☐	☐	☐	☒

This site is not subject to a Williamson Act contract. There are no Williamson Act contract lands within the vicinity of the Project site (DOC 2016). 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),	☐	☐	☐	☒

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				

The Project site is located in a developed area of the community of Stirling City, identified as Urban and Built-Up Land, and is not located in a forestland protection or timber production 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) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No identified forest lands exist on the Project site or within the vicinity of the Project area. The Project is the replacement of portions of existing wastewater pipeline and the improvement of the wastewater conveyance system. 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?	☐	☐	☐	☒

The Project site is identified as Urban and Built-Up Land by the DOC. While existing open forest surrounds the community, the surrounding land is designated as Other Land by the DOC (DOC 2019a). Furthermore, the Project is the replacement of existing wastewater infrastructure and would not extend to those areas beyond Stirling City's boundaries. No designated farmland 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

The following information was obtained from the Stirling City Sewer Rehabilitation Project Air Quality & Greenhouse Gas Technical Memorandum performed by ECORP Consulting Inc., in February 2020. See *Appendix A* for this assessment.

4.3.1 Environmental Setting

The Proposed Project is located within the Northern Sacramento Valley Air Basin (NSVAB). The NSVAB consists of seven counties: Sutter, Yuba, Colusa, Butte, Glenn, Tehama, and Shasta. The NSVAB is bounded on the north and west by the Coastal Mountain Range and on the east by the southern end of the Cascade Mountain Range and the northern end of the Sierra Nevada. These mountain ranges reach heights in excess of 6,000 feet above mean sea level, with individual peaks rising much higher. The mountains form a substantial physical barrier to locally created pollution as well as to pollution transported northward on prevailing winds from the Sacramento metropolitan area (SVAQEEP 2015).

The environmental conditions of Butte County are conducive to potentially adverse air quality conditions. The basin area traps pollutants between two mountain ranges to the east and the west. This problem is exacerbated by a temperature inversion layer that traps air at lower levels below an overlying layer of warmer air. Prevailing winds in the area are generally from the south and southwest. Sea breezes flow over the San Francisco Bay Area and into the Sacramento Valley, transporting pollutants from the large urban areas. Growth and urbanization in Butte County have also contributed to an increase in emissions.

Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O_3), course particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in *Table 4.3-1*.

Table 4.3-1. Criteria Air Pollutants- Summary of Common Sources and Effects

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
CO	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, effecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
NO_2	A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere.
O_3	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (NOx) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
PM_{10} & $PM_{2.5}$	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
SO_2	A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives.	Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility.

Source: CAPCOA 2013

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?	☐	☐	☐	☒

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan 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. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. The Butte County portion of the NSVAB is classified nonattainment for the federal O_3 standard.

The *2015 Air Quality Attainment Plan* is the most recent air quality planning document covering Butte County. Air quality attainment plans are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. State law makes CARB the lead agency for all purposes related to the *Air Quality Attainment Plan*. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The *2015 Air Quality Attainment Plan* includes forecast reactive organic gas (ROG) and NO_X emissions (O_3 precursors) for the entire NSVAB through the year 2020. The plan also includes control strategies necessary to attain the California O_3 standard at the earliest practicable date, as well as developed emissions inventories and associated emissions projections for the region showing a downtrend for both ROG and NO_X.

The consistency of the Proposed Project with the *2015 Air Quality Attainment Plan* is determined by its consistency with air pollutant emission projections in the plan. The *2015 Air Quality Attainment Plan* addresses growth by projecting the growth in emissions based on different indicators. For example, population forecasts adopted by local governments are used to forecast population-related emissions. Through the planning process, emission growth is offset by basin-wide controls on stationary, area, and transportation sources of air pollution. In other words, the plans and control measures in the *Air Quality*

Attainment Plan are based on information derived from projected growth in order to predict future emissions and then determine strategies and regulatory controls for the reduction of emissions. The Project does not include development of new housing or employment centers and would not induce population or employment growth. Therefore, the Project would not affect local plans for population growth and the proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of the *2015 Air Quality Attainment Plan*. Furthermore, once the Project is completed, there will be no resultant increase in automobile trips to the area because the proposed improvements will not require daily visits. No impact would occur.

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?	☐	☐	☒	☐

The Proposed Project would result in short-term emissions from construction activities. Construction generated emissions are short term and of temporary duration, lasting only as long as construction activities occur. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction associated with the proposed Project would generate short-term emissions of criteria air pollutants, including ROG, CO, NO_X, PM_{10}, and $PM_{2.5}$.

Construction-generated emissions associated with the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. The CalEEMod model was adjusted to account for the demolition of existing roadway pavement and hauling of demolished material associated with the trenching in roadways necessary for the installation of proposed pipelines. Excess soil generated from pipeline installation would need to be hauled and this activity is also accounted. Air quality impacts were assessed in accordance with methodologies recommended the Butte County Air Quality Management District (BCAQMD), which has established significance thresholds to determine if a project would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation.

Predicted maximum construction-generated emissions for the Proposed Project are summarized in *Table 4.3-2*.

Table 4.3-2. Construction-Related Emissions

Construction Year	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Pounds per Day						
Project Construction	2.69	26.33	23.74	0.04	2.12	1.27
BCAQMD Daily Significance Threshold	*137*	*137*	-	-	*80*	-
Exceed BCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Tons per Year						
Project Construction	0.1	1.3	1.1	0.0	0.1	0.1
BCAQMD Annual Significance Threshold	*4.5*	*4.5*	-	-	-	-
Exceed BCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for Model Data Outputs.

Notes: Emissions calculations account for the trenching of 5,500 linear feet for the installation of replacement pipelines and 900 linear feet for the installation of new laterals. Emissions modeling accounts for the hauling of 300 cubic yards of native soil export and 300 cubic yards of soil import. Emissions modeling also accounts for the demolition of 462.8 tons of existing roadway and hauling this material from the construction site.

As shown in *Table 4.3-2*, emissions generated during Project construction would not exceed the BCAQMD's regional thresholds of significance.

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 the rehabilitation of existing sewage collection facilities. Once installation is complete it would not be a source of operational emissions. Therefore, the proposed Project would not change the permanent use of the Project site or contribute to on- or offsite emissions.

EPA 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 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 4.3-3*. 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.

Table 4.3-3. Construction-related Emissions (EPA Conformity Determination Analysis)

Construction	Pollutant (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Project Construction	0.1	1.3	1.1	0.0	0.1	0.1
EPA Conformity Determination Thresholds (40 CFR 93.153)	*100*	*100*	*100*	*100*	*100*	*100*
Exceed EPA Conformity Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions calculations account for the trenching of 5,500 linear feet for the installation of replacement pipelines and 900 linear feet for the installation of new laterals. Emissions modeling accounts for the hauling of 300 cubic yards of native soil export and 300 cubic yards of soil import. Emissions modeling also accounts for the demolition of 462.8 tons of existing roadway and hauling this material from the construction site.

As shown in *Table 4.3-3*, projected emissions resulting from the Project fall below the EPA Conformity Determination thresholds. The Project would not generate emissions during operations. 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) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

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 include residences surrounding the site.

Construction-related activities would result in temporary, short-term Project-generated emissions of diesel particulate matter (DPM) from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading), soil hauling truck traffic, paving, and other miscellaneous activities. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-

fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted the maximum construction-related onsite emissions of exhaust $PM_{2.5}$, considered a surrogate for DPM, would be 1.11 pound per day during construction activity ($PM_{2.5}$ is considered a surrogate for DPM because more than 90 percent of DPM is less than one microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter [i.e., $PM_{2.5}$]. Most $PM_{2.5}$ derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Furthermore, even during the most intense month of construction, emissions of DPM would be generated from different locations on the Project site, rather than a single location, because different types of construction activities (e.g., site preparation, trenching, grading) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-, 30-, or nine-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the proposed Project. Consequently, an important consideration is the fact that construction of the Proposed Project is anticipated to last 100 days. Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the relatively short duration of construction activities required to develop the site, and the highly dispersive properties of DPM, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics.

In terms of operations, the Proposed Project involves the rehabilitation of existing sewage collection facilities. The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable air toxic emissions from Project operations. 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?	☐	☐	☒	☐

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, then 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 result in a less than significant impact related to odor emissions.

CARB's *Air Quality and Land Use Handbook* (2005) identifies the sources of the most common operational odor complaints received by local air districts. Typical sources include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. The Project does not contain any of the land uses identified as typically associated with emissions of objectionable odors. The Project involves the installation of a sewer conveyance pipe. However, the sewer conveyance pipe would fully contain conveyed sewage and would not result in the introduction of any new processes that are considered to have a high odor-generation potential.

4.3.3 Mitigation Measures

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

4.4 Biological Resources

The following information was provided by the Biological Resource Assessment (BRA) completed by ECORP Consulting, Inc. (2020b). These documents are included as *Appendix B* of this Initial Study.

4.4.1 Environmental Setting

Stirling City is an unincorporated community in northern Butte County, north of Magalia. The Project area within Stirling City is in an alley between Gypsum Street and 100 feet past Diamond Street. The linear Project site spans a length of approximately 2,700 feet north to south in the unpaved alley. The Project site occurs in Township 24 North, Range 4 East (Mount Diablo Base and Meridian) of the "Stirling City, California" U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps. The approximate center of the Project is located at latitude 39°54'30.4"N and longitude 121°31'48.1"W, within the North Fork Feather watershed (USGS Hydrological Unit Code #18020121). The Project Survey Area was defined as the proposed sewer pipeline alignment with a 100-foot buffer.

Due to the urban and disturbed nature of the Project site and the fact that it is entirely encompassed by development, the Project site does not provide much habitat for wildlife species. However, some plant and animal species were observed during the biological reconnaissance survey conducted on December 11, 2019 by ECORP Consulting, Inc. (2020b).

Vegetation Communities and Land Cover

Project elements were evaluated in the field by walking the Project site and a 100-foot buffer. The Project area is an approximately 20-foot wide alleyway situated behind houses facing either Skyway or Manzanita Street. The alley appears to be frequently used to access buildings and dwellings, and many stored vehicles, piles of debris, small outbuildings, and other urban items (many discarded) occur throughout the alley. No special-status habitats or vegetation communities were observed on within the Project Survey area. Plant species observed were typical of roadsides, the developed land present on the Project site, and the time of the year in which the survey was conducted.

Observed plant species include ornamental landscaping, escaped human commensal species, and large native conifers (Jeffrey pine (*Pinus jeffreyi*), ponderosa pine (*Pinus ponderosa*), incense cedar (*Calocedrus decurrens*), and Douglas fir (*Pseudotsuga menziesii*)), which dominate the vegetation. Vines including English ivy (*Hedera helix*), Scotch broom (*Cytisus scoparius*), periwinkle (*Vinca major*), wisteria (*Wisteria sinensis*), California rose (*Rosa californica*), and Himalayan blackberry (*Rubus armeniacus*) often covered fences and borders with surrounding yards. Forbs and ground covers identified included plantain (*Plantago* sp.), knotweed (*Polygonum* sp.), and St. John's wort (*Hypericum perforatum*). Filling out the vegetation were scattered manzanita (*Arctostaphylos* sp.), madrone (*Arbutus menziesii*), black oak (*Quercus kelloggii*), persimmon (*Diospyros* sp.), privet (*Ligustrum* sp.), birch (*Betula* sp.), *Prunus,* and apple (*Malus* sp.) trees. The alley appears to be sprayed with herbicide on occasion to control weed growth. Numerous discarded or idle cars in various stages of decay or repair occur throughout the Survey Area.

Wildlife

Due to the urban nature of the Project area and the fact that work will be performed within the alley, hardscapes, and in developed areas, the Project area provides very limited habitat for wildlife species. Wildlife observed during the survey included Steller's jay (*Cyanocitta stelleri*), common raven (*Corvus corax*), red-shouldered hawk (*Buteo lineatus*), and red-breasted nuthatch (*Sitta canadensis*). Trees and vegetation adjacent to work areas have the potential to support nesting birds during select times of the year.

Aquatic Features

The National Wetlands Inventory (NWI) identifies one freshwater pond and two riverine features near the defined Survey Area. An unnamed ephemeral drainage runs north to south east of town, and a seasonally inundated pond fills from it. Another riverine feature occurs southwest of the Survey Area outside the town limits.

Soils

According to the NRCS soil survey for Tehama County, California (Version 14, Oct 16, 2019), one soil unit occurs in the Project site (NRCS 2019*)*. Soil onsite is composed of Paradiso loam, on 2 percent -15 percent slopes. This soil type is very deep and well-drained, occurring over volcanic rocks. It is not considered hydric. The Project site contains a proportion of imported fill dirt and gravel as well.

4.4.2 Evaluation of Potentially Occurring Special-Status Species

Based on species occurrence information from the literature review and observations in the field, a list of special-status California and federal Endangered Species Act (ESA) species, California Natural Diversity Database (CNDDB)-tracked plant and animal species, and California Native Plant Society's (CNPS') Electronic Inventory species that have the potential to occur within the Project area were compiled and included in the BRA which is in *Appendix B* of this IS/MND.

The CNDDB and CNPS database searches were conducted on November 22, 2019. These queries reported 54 special-status plant species and 24 special-status wildlife species (*Appendix B*) historically within in the nine-quad vicinity of the Project Survey Area. The Survey Area does not support suitable habitat for any of the 54 plant species identified. Of the 24 animal species returned in the database query, seven sensitive bird species have moderate to low potential to occur within the Survey Area based on current site conditions and habitat characteristics. These are: sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*A. cooperii*), Nuttall's woodpecker (*Picoides nuttallii*), Williamson's sapsucker (*Sphyrapicus thyroideus*), olive-sided flycatcher (*Contopus cooperi*), oak titmouse (*Baelophus inornatus*), and Cassin's finch (*Haemorhous cassinii*). No special-status species were observed during the survey (*Appendix B*).

4.4.3 Potentially Regulated Aquatic Habitats/Features

A formal jurisdictional delineation was not conducted, but no potential waters or wetlands occur within the Survey Area. All Project activities will be within pavement or ruderal areas and no impact will occur to ditches, regulated aquatic habitats, or waters.

4.4.4 Nesting Birds

Potential nesting habitat for birds protected by the federal MBTA and California Fish and Game Code is present within trees in the Survey Area. Raptors typically breed between February and August, and songbirds and other passerines generally nest between March and August. No large stick nests indicative of raptors were documented in any trees within the Survey Area. However, Cooper's hawk, Nuttall's woodpecker, and oak titmouse, as well as all other birds protected under the MBTA, could suffer nest failure if they establish nests in close proximity to work areas. Given that the Project site is within the community limits and behind houses in an alley, any nesting birds are assumed to be relatively tolerant of high levels of disturbance.

4.4.5 Wildlife Movement Corridors, Linkages, and Significant Ecological Areas

The Project area was assessed for its ability to function as a wildlife corridor. The concept of habitat corridors addresses the linkage between large blocks of habitat that allow safe movement for mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include areas such as greenbelts, refuges, underpasses, riparian areas, creeks, and biogeographic land bridges. In general, a corridor can be described as a linear habitat, embedded within a dissimilar matrix, which connects two or more larger blocks of habitat.

Wildlife movement corridors are critical for the functioning of ecological systems for several reasons. Corridors can connect and preserve the integrity of water, food, and cover sources. In addition, wildlife movement among corridors and between subpopulations provides for genetic exchange, thereby maintaining genetic variability and ability to respond to changing environmental conditions. Corridors may be especially critical for small populations already subject to loss of variability from genetic drift and effects of inbreeding. As can be expected, corridor use and wildlife dispersal and immigration patterns vary greatly among taxa.

4.4.6 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?	☐	☒	☐	☐

Seven sensitive bird species have moderate to low potential to occur within the Survey Area based on current site conditions and habitat characteristics. These are: sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*A. cooperii*), Nuttall's woodpecker (*Picoides nuttallii*), Williamson's sapsucker (*Sphyrapicus thyroideus*), olive-sided flycatcher (*Contopus cooperi*), oak titmouse (*Baelophus inornatus*), and Cassin's finch (*Haemorhous cassinii*). Project construction is the only phase during which these bird species may

experience habitat disturbance. Due to the disturbed nature of the Project area and the fact that the pipeline replacement will occur underground, the Project is not expected to have a significant impact on these species.

Nesting birds, including Cooper's hawk, Nuttall's woodpecker, and oak titmouse, as well as all other birds protected under the MBTA, could suffer nest failure if they establish nests in close proximity to work areas. However, given that the Project site is within community limits and behind houses in an alley, any nesting birds are assumed to be tolerant of high levels of disturbance. However, to avoid potential impacts to nesting birds, implementation of mitigation measures **BIO-1** and **BIO-2** is required. Implementation of **BIO-1** and **BIO-2** will reduce the potential impact to less than significant.

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 CDFW or USFWS?	☐	☐	☐	☒

No creeks, stream or rivers exist in the Project right-of-way. No riparian habitats or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFW or USFWS have been identified in the Project right-of-way. The Project is not located near enough in proximity to riparian habitat or any other sensitive natural community to have a potentially significant impact. 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 riparian habitats or wetlands identified in local or regional plans, policies, regulations, or by the CDFW or USFWS have been identified in the Project right-of-way. The Project is not located near enough in proximity to federally protected wetlands a potentially significant impact. 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?	☐	☐	☒	☐

The Project site was assessed for its ability to function as a wildlife corridor. The concept of habitat corridors addresses the linkage between large blocks of habitat that allow the safe movement of mammals and other wildlife species from one habitat area to another. The definition of a corridor is varied, but corridors may include such areas as greenbelts, refuge systems, underpasses, and biogeographic land bridges, for example. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. Corridor use and wildlife movement patterns vary greatly among species.

The Project work area is a residential alley surrounded by development on all sides. Movement opportunities for wildlife are very restricted from west to east due to housing, residential fences, and other infrastructure. However, terrestrial wildlife (mesocarnivores, California quail (*Callipepla californica*), turkey (*Meleagris gallopavo*), mule deer (*Odocoileus hemionus*)) probably use the alley to traverse north-south through town. Because, the Project will not permanently impact wildlife movement opportunities due to the pipeline to be repaired is underground, the Project will 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?	☐	☒	☐	☐

The Butte County General Plan includes tree and biological resource protection policies. Items of note within the general plan as related to biological resources include Policy CIR-P3.10 within the Circulation Element which states that "trees located along urban streets shall be protected. If maintenance or upgrading requires tree removal, the trees shall be replaced." Additionally, the Biological Resources section of the Conservation and Open Space Element contains numerous goals and resultant policies

aimed to protect natural and biological resources. Goal COS-6 asserts that entities engage in cooperative planning efforts to protect biological resources, while Goal COS-7 realizes the need to conserve and enhance habitat for protected species and sensitive biological communities. The need to maintain and promote native vegetation is emphasized by Goal COS-8, while Goal COS-9 recognizes the need to protect special-status plant and animal species. Lastly, Goal COS-10 aims to facilitate the survival of deer herds in winter and critical winter migratory deer herd ranges.

The Project does not involve the removal of trees or significantly impact deer survival, and with the implementation of **BIO-1** and **BIO-2**, the Project will not significantly impact sensitive communities. Thus, the Project would have a less than significant impact in this area with implementation of mitigation measures **BIO-1** and **BIO-2**.

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?	☐	☐	☐	☒

The Project site is located beyond the boundaries of the Butte Regional Conservation Plan (Butte County 2019b). The Project site is not located within the boundaries of an applicable conservation plan. As such, the Project would have no impact in this area.

4.4.7 Mitigation Measures

BIO-1: Implement a nesting bird work window to avoid disturbance of nesting birds. All ground disturbing and vegetation disturbing work shall be completed during the non-nesting season between the dates of September 1 through January 31. Construction activities are prohibited during the nesting season of February 1-August 31.

Timing/Implementation: *During construction activities*

Monitoring/Enforcement: *Butte County and the Project construction lead*

BIO-2: If **BIO-1** is determined infeasible, a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable habitat on the Project site no more than fourteen days prior to the commencement of construction during the nesting season (February 1-August 31). Surveys shall be conducted within 100 feet of all area to be disturbed by the Project. If active nests are found, a no-disturbance buffer around the nest shall be established. The buffer distance shall be established by a biologist in consultation with CDFW or the CEQA lead agency. Active nests should be monitored, and the buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. Once the young are independent of the nest, no further measures are necessary. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

Timing/Implementation:	*Survey no more than 14 days prior to the commencement of Project construction activity and monitor nests during construction.*
Monitoring/Enforcement:	*Butte County and the Project construction lead*

4.5 Cultural Resources

4.5.1 Cultural Resources Inventory Report

A Historic Property Identification Report: Cultural Resources Inventory Evaluation was prepared by ECORP Consulting, Inc. (2020c) for the Project to determine if cultural resources were present in or adjacent to the Project area and assess the sensitivity of the Project area for undiscovered or buried cultural resources. The analysis of cultural resources was based on a records and literature search conducted at the Northeast Information Center (NEIC) of the California Historical Resources Information System (CHRIS) at California State University (CSU)-Chico on (NEIC search # W19-187), a literature review, and a field survey performed on December 11, 2019. The literature search included the results of previous surveys within a one mile of the Proposed Project location.

As a part of the Cultural Survey, ECORP contacted the California Native American Heritage Commission (NAHC) on November 26, 2019 to request a search of the Sacred Lands File for the Area of Potential Effect (APE). This search can determine whether or not Sacred Lands have been recorded by California Native American tribes within the APE, because the Sacred Lands File is populated by members of the Native American community who have knowledge about the locations of tribal resources. The search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project area.

Following the SWRCB prescribed process for CEQA-Plus projects, ECORP contacted all persons or organizations on the NAHC list by letter on January 2, 2020 to request information on unrecorded cultural resources that may exist within the current Project Area, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. Each individual was subsequently telephoned on January 08, 2020 to ensure that the materials had been received and to further solicit comments. No responses to the follow-up letters or phone calls to individual tribal entities were received as of the preparation of this document.

Assembly Bill 52 (AB 52) requires that prior to the release of a CEQA document for a project, an agency begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. The County did not receive any consultation requests from a Native American tribe. Thus, further consultation was not performed.

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 National Historic Preservation Act, it is also exempted from disclosure under the Freedom of Information Act. Likewise, the Information Centers of the 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 attachment in this Initial Study. While information describing the various Cultural Resources time periods is included in the Initial Study discussion, all references to location of artifacts have been removed for confidentiality and protection of these resources.

Area of Potential Affects

The Area of Potential Affects (APE) consists of the horizontal and vertical limits of the 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 CEQA, the term Project area is used rather than APE. For the purpose of this document, the terms Project area and APE are interchangeable.

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 and CEQA. This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements described in the official Project description. The horizontal APE also represents the survey coverage area. The Project's horizontal APE consists of the sewer pipeline alignment and measures ± 2,700 feet in total length. The proposed alignment is primarily confined to the alleyway and city streets. 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 includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project, depending on how deep the existing water pipes are currently located. This cultural resource study determined trenching will not exceed 12 feet below surface, or the depth of the existing pipes.

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. For the Project, the above-surface vertical APE is not expected to extend above-ground.

4.5.1 Environmental Setting

The Project area consists of graveled and paved portions located at the rear of residential parcels. The alley also consisted of modern debris, vehicles, and other discarded items. The APE, the footprint of the existing underground sewer system and manholes, crosses seven paved streets within Stirling City: Gypsum, Mica, Slate, Lava, Granite, Quartz, and Diamond streets. The streets are all paved and in various states of repair and maintenance. The southern portion of the APE located between Quartz and Diamond streets crosses the Stirling City Forest Fire Station property. The fire station within the APE consisted of the entirely paved areas and no buildings (ECORP 2020c).

Pre-Contact History

Regional

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

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

In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. Mortars and pestles were added to metates and manos for grinding seeds and other vegetable material. Flaked-stone tools became more refined and specialized, and bone tools were more common. The introduction of the bow and arrow into the region sometime around 2,000 BP is indicated by the presence of small projectile points.

Local

Paleoindian Period (13,500 – 10,000 BP): The earliest evidence of human occupation of north-central California comes in the form of isolated, large projectile points which are stylistically similar to the early, well-known Clovis points. Large projectile points may have been used for only a 500-year window between 13,250 and 12,800 BP. Although no fluted projectile points have been discovered in the Sacramento Valley, isolated Clovis-like points have been discovered in the Northern Sierra Nevada and North Coast ranges in neighboring counties to the Project Area. The most substantial evidence of these fluted points come from several sites in Lake County, southwest of the current Project Area.

Lower Archaic Period (10,000 – 7,500 BP): Stronger evidence of human occupation in the northern Sacramento Valley region came from artifacts found in the upland areas to the north and west of Borax Lake dating to after 9,000 cal BP. These are affiliated with the *Borax Lake Pattern*, which spans from 9,000 to 5,000 cal BP. It is defined by wide-stemmed projectile points, handstones, milling slabs, ovoid flake tools, and many other utilitarian items.

Middle Archaic Period (7,500 – 2,500 BP): During this period there was a significant increase in cultural diversity during this period in the region of the Project Area. Components include contracting-stemmed, notched, and concave-based dart points that are somewhat similar to other Middle Archaic finds in surrounding regions, but are not associated with established patterns in the outlying areas such as Martis, Buck's Lake, or Squaw Creek. Artifact assemblages from this period are diverse and include a wide variety of domestic tools, the first local evidence of mortar and pestle use, and acorn macrofossils.

Upper Archaic Period (2,500 – 1,000 BP): This period is characterized by a large break in the archaeological record around 3,000 cal BP; the Whiskeytown Pattern in the upper Sacramento Valley is characterized by a variety of corner-notched and side-notched dart points, milling slabs, handstones, pebble net weights, and only some mortars and pestles. Permanent village settlements were associated with the Windmiller Pattern site in the Delta and Berkey pattern sites in the Clear Lake Basin. Other significant residential components have been found at sites in Butte County dating to this time period that have not been related to established cultural complexes. Artifacts reflect an increased reliance on mortar and pestle, include a wide range of cooking features, more intensive use of bone tools, and evidence of occupation over multiple seasons. This type of evidence leads to the inference that centralized villages existed with established trade networks and were supported by forays into the outlying areas for seasonal gathering or trade, and also relied more on long-term food storage.

Emergent Period (post 1,000 BP): This era is characterized by increased cultural complexity and diversity in northern California; it corresponds with the Augustine Pattern, which is characterized by the establishment of large villages along rivers supported by an intensified subsistence strategy with greater dependence on fish. Fishing implements and bow-and-arrow technology appeared during this time, and large numbers of hopper mortars and pestles indicate intensification of plant food resources. Cultural expression is reflected in artifacts such as bone and stone decorative pendants, abalone shell pendants, gaming pieces, and a variety of shell beads. House structures, cooking features, and formal cemetery areas are identified in village sites of the Augustine Pattern, as are shell midden deposits rich with freshwater shellfish, butchered mammal bone, fish bone, acorns, small seeds, and other plant foods. The population had transitioned from mobile settlements to more permanent villages with abundant trade and exchange, food storage, and production of goods for trade.

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.

The current Project Area falls within the ethnographic tribal territory of the Maidu, located in the lower foothills of the western slopes of the Sierra Nevada range and in the periphery of the Northern Sacramento Valley. 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). Because many believe the Mountain Maidu and Konkow to be so closely related, ethnographers tend to group them as one.

The Konkow occupied territory located immediately adjacent and to the southwest of the Mountain Maidu, along the Feather and Sacramento rivers, to their southern boundary at the Sutter Buttes. The

Konkow were primarily located in the lower elevations of the Sierra Nevada and along the valley floor. Tribal territories adjacent to the Maidu and Konkow included the Atsugewi and Yana to the north, the Nomlaki and Patwin to the west, the Paiute and Washoe to the east, and the Nisenan to the south.

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.

Further ethnographic information is included in Section 4.18. Tribal Cultural Resources of this document.

Project Area History

The Project Area is located in the northern portion of Butte County. Butte County was one of the original 27 counties in California, and originally encompassed a much larger area than it does today. It was named for the landform now known as the Sutter Buttes, located in present-day Sutter County to the south. In the latter part of the nineteenth century, the county land was primarily agricultural, with timber and mineral lands encompassing less than half the county area. Captain Luis A. Argüello led an expedition to the region in 1820 and was likely the earliest non-native to explore the area. Fur trappers of the Hudson Bay Company followed and traversed the region as early as 1828. Other hunters and settlers in the Sacramento Valley began to travel on the Hudson Bay Trail to Oregon and then south to California. John Bidwell came to Sutter's Fort in California using this route. He mapped the upper reaches of the Sacramento Valley. People used Bidwell's maps to identify land when applying for land grants from the Mexican Government.

In 1844 Edward A. Farwell and Thomas Fallon settled on the Farwell Grant, which encompasses the town of Chico; this was to be the first settlement in Butte County. John Bidwell discovered gold on the Feather River two months after James Marshal's first gold discovery at Sutter's Mill in Coloma. This led to an influx of gold-seekers to the area, and the river was lined with countless mining camps. Some of these camps grew to prosper into towns; others were short-lived.

The County of Butte was organized after California gained statehood and counties were established under the Act of February 18, 1850. Butte County originally included the majority of lands in what is now Lassen, Plumas, Tehama, Colusa, and Sutter counties, including the Sutter Buttes from which the County got its name. The boundaries were reconfigured within the next few months.

The Project Area is comprised of the town Stirling City. Stirling City was established by the Diamond Match Company in 1902. The Diamond Match Company was the largest manufacturer of matches in the U.S. in the late nineteenth century. The Diamond Match Company was established by O. C. Barber and began its operations in the 1880s in Ohio. The company ran its western operations in Butte County from 1901 to the 1980s. The sewer system within Stirling City was originally constructed and operated by the Diamond Match Company, now owned by Sierra Pacific Industries, and was turned over to the Stirling City Sewer Maintenance District in 1960. The district operated the system until it dissolved in 1981. The County Service Area 82 was then formed to take over operation and maintenance functions.

John Heard Comstock, an employee of the Diamond Match Company, came to the Chico area in 1901 to appraised timberland for the company. The same year, the match company had purchased 70,000 acres of timberland from the Sierra Lumber Company and selected 125 acres of land to build a sawmill near Magalia Ridge. This location became Stirling City. In 1903, the land was cleared, and construction of the mill started. Fred Clough became the first Pacific Coast manager for the Diamond Match Company and named the town Stirling City after the Stirling Company who manufactured boilers, those of which were used for the sawmill powerhouse. The town of Stirling City grew in support to feed and house its employees working at the mill. The town lot subdivision was soon put on the market and lots were being sold for 75 to 250 dollars.

The Diamond Match Company purchased 241 acres of land south of Chico for a match manufacturing plant, named Barber after the company's first president. The Diamond Match Company built a 32-mile long Butte County Railroad to transport lumber and workers from Stirling City to the Chico match factory. A post office was established in 1905. The railroad reached Stirling City in 1904 and the sawmill began its operations. The Chico manufacturing plant was opened in 1906. The Butte County Railroad operation was turned over to the Southern Pacific Railroad in 1907.

By 1918, Stirling City had a daily capacity of 250,000 feet of lumber. A fire in 1931 destroyed three square blocks in Stirling City. The fire destroyed most of the buildings in the business district and also burned 20 homes and cabins.

There were once boardwalks along the central streets in Stirling City, which were necessary during the winter due to the dirt streets turning into mud. In 1922, Laurel Street (known today as Skyway) in Stirling City was surfaced with asphalt macadam, two-inch base.

The Stirling City sawmill closed on January 31, 1958 and was lost to a fire during demolition the following year. In 1975, the Chico match factory closed its doors. A stud mill, a small electric sawmill, opened in Stirling City in 1964 and closed in 1974. The Butte County Railroad stopped operating in 1974 and the tracks were taken up in the late 1970s due to lack of use of the line. In 1992, Sierra Pacific Industries purchased Diamond Lands Corporation, historically the Diamond Match Company

Records Search

Prior to conducting the intensive-level field survey, a search of archaeological records maintained by the NEIC at CSU-Chico was conducted, dated November 13, 2019. The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the proposed Project location, and whether previously documented pre-contact or historic-period archaeological sites, architectural resources, or traditional cultural properties exist within this area. The records search documented the following existing conditions for the Project area.

Previous Archaeological Survey

Thirteen previous cultural resources investigations have been conducted within 0.5 mile of the Project Area, covering 50 percent of the total area surrounding the Project Area within the record search radius. These studies revealed the presence of six historic-period resources and one pre-contact resource. The previous studies were conducted between 1984 and 2015.

The results of the records search indicate that the Stirling City Fire Station parcel had been previously recorded in 1994 as part of CAL FIRE's inventory and evaluation of all CAL FIRE buildings in California; however, a complete archaeological survey of the entire APE had not been conducted. In addition, the architectural inventory was conducted in 1994 and is out of date, and only included a small portion of APE; therefore, a pedestrian survey of the entire APE was warranted.

The records search also determined that seven previously recorded cultural resources are located within 0.5 mile of the Project Area. Six of the resources are historic-period and consist of canals, ditches, a can dump, trestle footing, a sewer pond, and the Stirling City Forest Fire Station. One of the previously recorded resources is a pre-contact lithic scatter located south of Stirling City.

Recorded Cultural Resources

The OHP's *Directory of Properties, Historic Property Data File for Butte County* (dated April 5, 2012) does include the Stirling City Forest Fire Station buildings located at 16999 Laurel Street (Skyway) within the Project Area. The Stirling City Forest Fire Station buildings were constructed in 1937 and 1938. According to the OHP data file for Butte County, the Stirling City Forest Fire Station buildings appear eligible for the National Register or California Register through other evaluation (ECORP 2020c).

Field Survey

ECORP surveyed the Project Area for cultural resources on December 11, 2019. The APE consists of an approximate 20-foot-wide alleyway located between Manzanita Street and Skyway, bounded on either end by Gypsum Street and Diamond Street.

4.5.1 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?	☐	☒	☐	☐

The Stirling City Forest Fire Station and associated buildings consisting of an office, ranger's residence, residence garage, warehouse/garage, combination barracks, and two storage sheds are potential historic buildings. The seven buildings that comprise the Stirling City Forest Fire Station (site P-04-1325) were evaluated for the NRHP by Mark V. Thornton in 1994. The Office, Ranger's Residence, residence garage, and warehouse/garage were determined eligible for the NRHP. The combination barracks were considered an important contributor to the facility and the two storage sheds were considered contributors. The Ranger's Residence was determined eligible for the NRHP as an individual property through a survey evaluation, and the Residence Garage and Residence Electrical House were determined eligible for the NRHP as a contributing element to a NRHP-eligible district through a survey evaluation. Therefore, P-04-1325 is treated as eligible for the NRHP and CRHR without further evaluation. However, the Proposed Project will not impact the character of the fire station or associated buildings. As such, the Project will have a less than significant impact on this historic resource.

Several historic period street segments were identified in the Project alignment. SC-001 though SC-007 are all historic period street segments in Stirling City, which appear on historic maps from 1903. The APE only encompasses approximately 30 feet of each liner resource. However, historic-period maps show the entirety of the historic-period street alignments and their length is approximated in *Table 4.5-1*. Evaluations for the entirety of each resource follow.

Table 4.5-1. Resources within the Project Area

Resource #	Street Name	Description	Date on Map	NRHP/ CRHR eligible? Y/N
SC-001	Gypsum Street	Approx. 30 ft long segment of 750-foot long Gypsum Street; Approx. 40 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic.	1903	No
SC-002	Mica Street	Approx. 30 ft long segment of 2,280-foot long Mica Street; Approx. 30 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic	1903	No
SC-003	Slate Street	Approx. 30 ft long segment of 357-foot long Slate Street; Approx. 25 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic	1903	No
SC-004	Lava Street	Approx. 30 ft long segment of 725-foot long Lava Street; Approx. 30 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic	1903	No
SC-005	Granite Street	Approx. 30 ft long segment of 750-foot long Granite Street; Approx. 30 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic	1903	No
SC-006	Quartz Street	Approx. 30 ft long segment of 780-foot long Quartz Street; Approx. 30 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic	1903	No
SC-007	Diamond Street	Approx. 30 ft long segment of 370-foot long Diamond Street; Approx. 30 ft wide, paved, currently in use and impacted from cracking, potholing, and light traffic	1903	No

The roads do not demonstrate an association with the lives of persons significant in history and the roads are not associated with historical events. Furthermore, the roads do not embody any distinctive characteristics of a type, period, or method of road construction, nor do they possess any artistic value. In addition, no archival evidence, or physical aspect of the roads indicates that they represent the work of a master road constructor or specific construction crew or company. Furthermore, these roads do not possess the potential to yield any additional information regarding the relationship or functionality of roads or provide any information that is not already represented in the archival record. Thus, as shown in *Table 4.5-1* above, road segments SC-001 to SC-007 do not meet NRHP or CRHR eligibility criteria as individual resources, nor as part of any known or suspected district. Thus, the Proposed Project will have no impact on officially designated historic roads.

Ultimately, the Cultural Resources Inventory concluded that no designated historic properties, buildings, nor roadways will be affected by the Proposed Project. The buildings identified are located outside of the

Project area and will remain undisturbed by the Project construction and operation. 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?	☐	☒	☐	☐

No archaeological resources were identified within the APE. The absence of such resources within the APE may best be explained by the degree of disturbance, namely paving, grading, and compacting, which portions of the APE have been subjected to. The field survey revealed that the Project site was primarily developed for housing or roadways. The Project will disturb very little undisturbed area, as the new pipeline will replace the existing pipeline with no change in location.

While no known archaeological resources were found during the Cultural Resources Inventory Report analysis, there always remains the potential for ground-disturbing activities to expose previously unrecorded archaeological resources. 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?	☐	☒	☐	☐

No known burial sites were identified during the field survey. A search of the Sacred Lands File by the NAHC failed to indicate the presence of Native American cultural resources in the Project area. Although no Native American burial sites nor other burial sites were identified in the Project area, there is a possibility that unanticipated human remains will be encountered during ground-disturbing project-related activities. As such, mitigation is required. Incorporation of mitigation measure **CUL-1,** which includes mitigation for encountering undiscovered burial sites, would reduce this impact to a less than significant level.

4.5.2 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 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find,

and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, he or she shall immediately notify the SWRCB, County, and applicable landowner. 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. 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, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to their satisfaction.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Butte 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: *Butte County and the Project construction lead*

4.6 Energy

4.6.1 Environmental Setting

Introduction

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

Electricity Services

Pacific Gas and Electric (PG&E) supplies electricity to Stirling City via hydroelectric power generated by Toadtown Powerhouse of Pacific Gas and Electric (PG&E), located in Magalia (PG&E 2020). 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.

Energy Consumption

Electricity use is measured in kilowatt-hours (kWh). 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 associated with non-residential land use in the Butte County from 2014 to 2018 is shown in *Table 4.6-1*. As indicated, the energy demand increased between the years 2014 and 2015 and declined between 2015 and 2018.

Table 4.6-1. Electricity Consumption in Butte County 2014-2018

Year	Electricity Consumption (kilowatt hours)
2018	756,702,499
2017	769,610,424
2016	760,806,386
2015	780,488,761
2014	770,622,394

Source: ECDMS 2019

Total automotive fuel consumption in Butte County from 2014 to 2018 is shown in *Table 4.6-2*. As shown, fuel consumption in the county increased between 2015 and 2018, then decreased between 2018 and 2019.

Table 4.6-2. Automotive Fuel Consumption in Butte County 2015-2019

Year	Total Fuel Consumption (gallons)
2019	117,632,337
2018	120,080,285
2017	122,436,165
2016	122,781,730
2015	119,502,294

Source: CARB 2017

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?	☐	☐	☒	☐

This impact analysis focuses on the one source of energy that is relevant to the Proposed Project: the equipment-fuel necessary for Project construction. While the Project involves the replacement of portions of sewage lines that will convey wastewater, some through the use of electricity, the quantity of wastewater pumped would not increase beyond existing conditions as a result of the Project. Therefore, the Project will not directly utilize electricity during operation. 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 would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

The Project will consume energy during the construction phase. 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 project. 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.

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?	☐	☐	☐	☒

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

4.6.3 Mitigation Measures

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

4.7 Geology and Soils

4.7.1 Environmental Setting

Geomorphic Setting

The Project site is located in the northern portion of the Sierra Nevada geomorphic province of California. The Sierra Nevada province is a tilted fault block nearly 400 miles long. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope (about 2°) that disappears under sediments of the Great Valley. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, are modified by glacial sculpturing, forming such scenic features as Yosemite Valley. The high crest culminates in Mt. Whitney with an elevation of 14,495 feet above sea level near the eastern scarp. The metamorphic bedrock contains gold bearing veins in the northwest trending Mother Lode. The northern Sierra boundary is marked where bedrock disappears under the Cenozoic volcanic cover of the Cascade Range (California Geological Survey [CGS] 2002).

Site Geology

According to the CGS, the Project site is underlain by tertiary (Tv) volcanic rock. The geology is made up of tertiary volcanic flow rocks with minor pyroclastic deposits (CGS 2016b).

Site Soils

According to the NRCS through the Web Soil Survey database, the Project site is composed of one soil unit: Paradiso Loam, 2 to 15 percent slopes, as shown in *Table 4.7-1*. The Web Soil Survey also identifies drainage, flooding, erosion, runoff class, frost action, and the linear extensibility potential for the Project soils. According to this survey, Paradiso Loam, 2 to 15 percent slope, is well drained, has a moderate to high runoff potential, and has no potential for flooding (less than once in 500 years). This soil has a moderate erosion potential and a moderate linear extensibility (shrink-swell) (NRCS 2019).

Table 4.7-1. Project Area Soil Characteristics

Soil	Percentage of Site	Drainage	Flooding Frequency Class	Erosion Hazard[1]
Paradiso Loam, 2 to 15 percent slope	100%	Well drained	None	Moderate
	Runoff Potential[2]	**Linear Extensibility (Rating)[3]**	**Frost Action[4]**	
Paradiso Loam, 2 to 15 percent slope	C (moderate-high)	5.8% (moderate)	None	

Source: NRCS 2019

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.

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 2010).

According to the DOC Data Viewer interactive mapping program, the closest earthquake faults to the Project site are the McKesick Peak fault (74 miles east) and the Old Station and Swains Hole faults (54 miles north) (DOC 2019b).

The Old Station and Swains Hole faults are located near Lassen Peak and are considered active faults which was active during the Holocene time. The latest small explosive eruption of Lassen Peak occurred

on May 22, 1915. The most recent large eruption occurred 1,100 years ago. Large eruptions of Mount Lassen occur approximately every 10,000 years (NPS 2015).

The McKesick Peak Fault is located between the eastern boarder of the Plumas National Forest and the western boarder of Nevada, near Honey Lake. The fault is considered active but is at a great distance from the Project site.

Paleontological Resources

A paleontological records search was requested from the University of California Museum of Paleontology (UCMP) on January 24, 2020. The search included a review of the institution's paleontology specimen collection records for Butte County, including the Project area and vicinity. In addition, a query of the UCMP catalog records; a review of regional geologic maps from the CGS; a review of local soils data; and a review of existing literature on paleontological resources of Butte 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 144 paleontological specimens were recorded from 56 identified localities and 88 unidentified localities in Butte County. Paleontological resources in Butte County include fossilized remains of plants, mammals, fish, mollusks, and microfossils. No specimens with identified localities in the UCMP database were found in Stirling City (UCMP 2019).

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?	☐	☐	☐	☒

i) The proposed project site is not located within an Alquist-Priolo Earthquake Zone (CGS 2010, 2015). There would be no impact related to fault rupture.

ii) According to CGS's Earthquake Shaking Potential for California mapping, the Project site is located in an area which is distant from known, active faults and will experience lower levels of ground shaking less frequently. In most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016a). The Project is the replacement of portions of sewage lines and related wastewater conveyance maintenance and improvements. All new infrastructure would be required to comply with the current county code, including any required seismic mitigation standards. Because of the required compliance with seismic mitigation standards and the distance from active faults, the Proposed Project would have a less than significant impact related to strong ground shaking.

iii) 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. CGS provides mapping for area susceptible to liquefaction in California. According to this mapping, the Project is not located in an area of liquefaction (CGS 2019). As such, the Proposed Project would result in a less than significant impact with regard to seismic-related ground failure, including liquefaction.

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

Overall, the project would have a less than significant impact regarding risk of landslides and seismic activity.

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?	☐	☐	☒	☐

As shown in *Table 4.7-1*, the Project soil has a moderate erosion potential. Construction activities during the Project would disturb soils and potentially expose them to wind and water erosion. The digging of trenches along some sections of the pipeline ROW to remove and replace existing pipeline would be the primary form of soil disturbance. The Project will disturb just over one acre of land, and as such will require implementation of 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 SWPPP and would be implemented to manage erosion and the loss of topsoil during construction-related activities (see *Section 4.10 Hydrology and Water Quality Environmental Checklist and Discussion*) (Caltrans 2016). Implementation of the Project's erosion control measure and any additional required BMPs would reduce soil erosion impacts to a less than significant impact. Upon completion of the Project, the Project area will be covered with in-kind groundcover along the unpaved alley. The Proposed Project will not significantly alter the characteristics of the alley surface. Implementation of the Project's erosion control measure and any additional required BMPs would reduce soil erosion impacts to be less than significant.

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?	☐	☐	☒	☐

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 2019). As indicated in *Table 4.7-1*, the Web Soil Survey identifies the Project site as having soils with no frost action potential. Additionally, as discussed in Item a) iii) above, the Project site is not identified as being in an area with a potential for liquefaction. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock.[3] No oil, gas, or high-volume water extraction wells are known to be present in the Project area. According to the USGS, the Project site is not located in an area of land subsidence (USGS 2018). 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 collapse potential of these soils must be determined for consideration in the foundation design. However, the Proposed Project does not involve the construction of buildings nor building foundations. The Project primarily involves underground pipeline construction and the replacement of manholes. Thus, soil collapse is not a concern for the Project. The impact in this area would be less than significant.

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?	☐	☐	☒	☐

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,

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

shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. As shown in *Table 4.7-1*, the linear extensibility value for the site is 5.8 percent. Soils with linear extensibility between three and six percent correlate to soils having moderate expansion potential. Although the soil is moderately expansive, the soil has supported the majority of the existing sewage infrastructure since it was originally installed in the 1940's and early 1950's. Further, the new PCV pipeline will be more structurally sound than the outdated clay pipeline and will undergo regular maintenance. Based on this information, the potential for impacts because of expansive soils would be less than significant.

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?	☐	☐	☒	☐

The Project involves pipe replacement and repairs to pipelines, and replacement of manholes to rehabilitate an existing wastewater conveyance system. The soils located in the Project area have not been deemed incapable of adequately supporting a wastewater disposal system. In fact, the wastewater disposal system currently exists in the same location and has since the 1940's. As such, 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
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

No known paleontological resources were identified as being found in Stirling City according to the UCMP (2020). Although no paleontological resources sites were identified in the Project area, 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 Butte County. The County 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 County 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: *Butte County and the Project construction lead*

4.8 Greenhouse Gas Emissions

The following information was obtained from the Stirling City Sewer Rehabilitation Project Air Quality & Greenhouse Gas Technical Memorandum performed by ECORP Consulting Inc., in February 2020. See *Appendix A* for this assessment.

4.8.1 Environmental Setting

Greenhouse gases (GHGs) 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 carbon dioxide (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 over 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in 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.

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?	☐	☐	☒	☐

The BCAQMD does not promulgate thresholds for GHG emissions; therefore, the analysis will rely on the significance thresholds established by the California Air Pollution Control Officers Association (CAPCOA), a non-profit association of the air pollution control officers from all 35 local air quality agencies throughout California. CAPCOA also considers projects that generate more than 900 metric tons of GHG to be significant. This threshold was developed to ensure at least 90 percent of new GHG emissions would be

reviewed and assessed for mitigation, thereby contributing to the Statewide GHG emissions reduction goals for the year 2020 promulgated under AB 32 and the post-2020 reduction goals promulgated under SB 32. Thus, both cumulatively and individually, projects that generate less than 900 metric tons CO_2e per year have a negligible contribution to overall emissions.

Construction-related activities that would generate GHGs 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). Construction-generated GHG emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Predicted maximum annual construction-generated emissions for the Proposed Project are summarized in *Table 4.8-1*.

Table 4.8-1. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons / Year)
Project Construction	195
GHG Significance Threshold	*900*
Exceed Threshold	**No**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for Model Data Outputs.

Notes: Emissions calculations account for the trenching of 5,500 linear feet for the installation of replacement pipelines and 900 linear feet for the installation of new laterals. Emissions modeling accounts for the hauling of 300 cubic yards of native soil export and 300 cubic yards of soil import. Emissions modeling also accounts for the demolition of 462.8 tons of existing roadway and hauling this material from the construction site.

As shown in *Table 4.8-1*, GHG emissions would remain below the respective threshold during Project construction.

In terms of operational GHG emissions, the Proposed Project involves the rehabilitation of existing sewage collection facilities. The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from Project operations. The Project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the Project is completed, there would be no resultant increase in automobile trips to the area because the pipeline would not require daily visits. This impact is less than significant.

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?	☐	☐	☐	☒

The Butte County Climate Action Plan (CAP) was adopted on February 25, 2014. The Butte County CAP provides goals, policies, and programs to reduce GHG emissions, address climate change adaptation, and

improve quality of life in the county. The Butte County CAP also supports statewide GHG emission-reduction goals. Programs and actions in the CAP are intended to help the County sustain its natural resources, grow efficiently, ensure long-term resiliency to a changing environmental and economic climate, and improve transportation. The Butte County CAP also serves as a Qualified GHG Reduction Strategy under CEQA, simplifying development review for new projects that are consistent with the CAP.

The Proposed Project involves the rehabilitation of existing sewage collection facilities and would in no way conflict with the goals, policies, or programs promulgated by the CAP. The Proposed Project would not include the provision of new permanent stationary or mobile sources of emissions, and therefore, by its very nature, would not generate quantifiable GHG emissions from Project operations. The Project does not propose any buildings and therefore no permanent source or stationary source emissions. Once the Project is completed, there would be no resultant increase in automobile trips to the area because the pipeline would not require daily visits. Thus, no impact would occur

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 California Code of Regulations (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 (CCR 2019).

Most hazardous materials regulation and enforcement in Butte County, including in Stirling City, is managed by the Butte County Environmental Health Division. The Division is responsible for responding to incidents involving any release or threatened release of hazardous materials. Threats to people, property and the environment are assessed, and then remedial action procedures are conducted under the supervision of a Registered Environmental Health Specialist. The Division is also responsible for the requiring all business that use hazardous materials to comply with the State required hazardous materials business plan submittal and registration with the California Environmental Reporting System.

Under Government Code § 65962.5, both the California Department of Toxic Substance Control (DTSC) and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the SWRCB (2019) and the DTSC (2019) lists identified no open cases of hazardous waste violations within the Stirling City or surrounding area.

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?	☐	☐	☒	☐

The Project involves the replacement of approximately 2,700 linear feet of 8-inch original clay pipe with 8-inch PVC pipe, the replacement of manholes, and the re-establish existing sewer lateral connections to the proposed sewer main. The Project is the rehabilitation of a broken and leaking wastewater conveyance system.

The operation of the Project does not require the routine transport, use, or disposal of hazardous material. The Project will involve the use of a limited amount of hazardous materials during construction; primarily in the form of oil and diesel fuel to power vehicles and equipment necessary for construction. However, these materials would be stored in safe containers designed specifically for the purpose and shall be used in responsible manner.

Upon the completion of construction, the Project would not require the transport, use or disposal of any hazardous material for Project operation. Therefore, the Project construction and operation phases would have 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?	☐	☐	☒	☐

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.

No hazardous materials will be utilized for the operational phase of the Project. The short-term use of hazardous materials during the construction phase 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?	☐	☐	☒	☐

As discussed in Issue a) and b), the Project has a very low potential to release hazardous materials as a minimal amount of oil and gasoline will be utilized during construction. No hazardous materials will be utilized during the Project's operational phase. The Project is the rehabilitation of a broken and leaking wastewater conveyance system. There is one school located within the Project vicinity. However, due to the less than significant risk associated with hazardous material substances, waste, or emissions, the impact to schools would be less than significant.

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?	☐	☐	☒	☐

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. A search of the DTSC and SWRCB lists identified no open cases of hazardous waste violations within the boundaries of the Project site or in the vicinity of the Project site. The new pipeline and manholes will be installed where an older pipeline and manholes currently exists and are to be removed. The Project will not disturb existing hazardous waste sites. All new pipelines will be installed in the existing street and alley right-of way. As a result, this would not create a significant hazard to the public or to the environment and would have a less than significant impact.

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 for people residing or working in the project area?	☐	☐	☐	☒

The nearest public airport to the Project site is the Chico Municipal Airport, approximately 14 to 18 miles southwest of the Project site. According to the Draft Update Butte County Airport Land Use Compatibility Plan, the Proposed Project is located outside of all compatibility and influence zones (Butte County 2017). Further, the Project involves the installation of underground pipelines and infrastructure which would have no potential to impact airplanes. 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?	☐	☐	☒	☐

The Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Skyway would serve as the primary evacuation route in case of emergency. Prior to the commencement of construction, the County's Public Works

Department will notify the Police and Fire departments of the construction work to be performed. Emergency response personnel will be made aware of construction timing so as to allow for re-routing of emergency response and evacuation plans as needed. During the operational phase, the underground pipelines will not interfere with emergency vehicle travel. Thus, the Project would not interfere with any emergency response or evacuation plans. Implementation of the 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?	☐	☐	☐	☒

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 community is a fire threatened community with a hazard level of three- high threat, according to the Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan (Butte County 2007). However, the Project is the removal of some existing portions of pipeline and subsequent replacement with new wastewater pipelines. Implementation of the 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

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 region includes all or large portions of Modoc, Siskiyou, Lassen, Shasta, Tehama, Glenn, Plumas, Butte, 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. Geographically, the region extends south from the Modoc Plateau and Cascade Range at the Oregon border, to the Sacramento-San Joaquin Delta (DWR 2003).

The Project site is located within boundaries of the North Fork Feather River Watershed, which is part of the Sacramento River Watershed. The North Fork Feather River Watershed is described as follows by the Sacramento River Watershed Program The North Fork Feather River starts with streams tributary to Lake Almanor, and after joining the East Branch North Fork, continues downstream to Lake Oroville. It is largely dominated by PG&E-operated hydropower facilities that include the Hamilton Branch, Butt Valley, Caribou 1 and 2, Rock Creek, Bucks Creek, Cresta, and Poe Powerhouses (SRWP 2019).

Groundwater

Groundwater in the State of California is managed and monitored by the DWR. The Project site is within the East Butte Subbasin, (basin number 5-021.59) of the Sacramento Valley Hydrologic Region (DWR 2018a). The original basin descriptions were provided in the 2003 Bulletin 118 (B118) Update completed by the DWR. The 2003 basin descriptions included available information on narrative descriptions of basin boundaries, summaries of the hydrologic and hydrogeologic setting, groundwater storage capacity and water budget, groundwater level and quality trends, well yields, basin management, and references. However, not all 2003 basin descriptions, including the East Butte Subbasin, have been updated for B118 Interim Update 2016 at this time.

The Project site is located in the 2003 B118 East Butte Subbasin (DWR 2003). As such, the following information is provided from the 2003 B118 for the East Butte Subbasin. The East Butte Subbasin is the portion of the Sacramento Valley Groundwater Basin 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. The northeast boundary along the Cascade Ranges is primarily a geographic boundary with some groundwater recharge occurring beyond that boundary. The subbasin is contiguous with the West Butte Subbasin at depth. Annual precipitation is approximately 18 inches in the valley increasing to 27 inches towards the eastern foothills. The estimated storage capacity to a depth of 200 feet is approximately 3,128,959 acre-feet. Estimates of groundwater extraction for agricultural; municipal and industrial; and environmental wetland uses are 104,000, 75,500 and 1,300 acre-feet respectively. Deep percolation of applied water is estimated to be 126,000 acre-feet (DWR 2003).

Project Site Hydrology and Onsite Drainage

The Project site is relatively flat, with elevations ranging from 3,515 to 3,650 feet above mean sea level (AMSL) over the approximately 2,700-foot-long, 20-foot-wide (54,000 square foot) Project site. The National Wetlands Inventory (NWI) identifies one freshwater pond and two riverine features near the defined Survey Area. An unnamed ephemeral drainage runs north to south east of town, and a seasonally inundated pond fills from it. Another riverine feature occurs southwest of the Survey Area outside the town limits (ECORP 2020b). However, no hydrologic features exist within the pipeline alignment.

In the general region which the Project is located in, the rainy period of the year lasts for 9.1 months, from September 13 to June 17, with a sliding 31-day rainfall of at least 0.5 inch. The most rain falls during the 31 days centered round February 17, with an average total accumulation of 6.4 inches.
The rainless period of the year lasts for 2.9 months, from June 17 to September 13. The least rain falls around July 31, with an average total accumulation of 0.0 inch (Weatherspark 2019).

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for the Project area (Map No. 06007C0250E) shows that the Project site is in shaded Zone X, meaning that the area is in the 0.2 percent annual chance (500-year) floodplain (FEMA 2011).

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?	☐	☐	☒	☐

The Project is the replacement of a broken and leaking wastewater conveyance system with new, structurally sound infrastructure. The Project will eliminate the any potential pollution discharge from the dilapidated pipelines; subsequently improving groundwater quality in the area.

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

General Permit applicants are required to submit to the appropriate regional board Permit Registration Documents for the Project, which include a Notice of Intent (NOI), risk assessment, site map, signed certification statement, an annual fee, and a SWPPP. The SWPPP includes pollution prevention measures (erosion and sediment control measures and measures to control non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, and a detailed construction timeline. The SWPPP must also include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges (Caltrans 2016).

Examples of typical construction best management practices include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, berms, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment and other pollutants from discharging to the drainage system or receiving waters. BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater (USEPA 2007).

Implementation of BMPs will minimize sedimentation off-site due to the Project. These will serve the purpose of halting the flow of excess water and sediment away from the disturbed area. The Project site

contains no creeks or streams on the site, but other hydrologic features exist in the Project vicinity. The Project site is also relatively flat, with elevations ranging from 3,515 to 3,650 feet AMSL. Thus, the potential for stormwater runoff into creeks and streams is very low. Following the completion of pipe removal and/or instillation of new pipe infrastructure, the trenches shall be filled with native soil and covered with compacted soil and/or rock that is of character of the existing alley. Strict WPC compliance, coupled with the use of appropriate BMPs, would reduce potential water quality impacts during construction activities.

Implementation of BMPs required as part of the SWPPP 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?	☐	☐	☐	☒

The Project is the replacement of approximately 2,700 feet of a 5,500-foot long wastewater conveyance pipeline, replacement of manholes, and re-establishment of existing lateral connections to the proposed sewer main. All construction will occur within the existing street and alley right-of-way.

The Project will not impact groundwater supply. The Project would not use any groundwater. The source of the water supplied to Stirling City will remain the same following the implementation of the Project.

The Project will not impact groundwater recharge. The Project entails the removal and replacement of existing pipeline. The Project will not introduce new impervious surface area to the Project site. Thus, the Project will have no impact in this area.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would:	☐	☐	☒	☐
i) result in substantial erosion or siltation on- or off-site;	☐	☐	☒	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☒	☐

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

i) According to the BRA performed for the Project, no creeks, streams, or other waterbodies exist on or nearby the Project site. As such, siltation of on- or off-site waterways would not occur (ECORP 2020b).

The Project construction activities would result in soil disturbances of slightly more than one acre during a construction phase. As such, a SWPPP, as described under item a above would be required. Excavation and grading activities associated with the Project will reduce vegetative cover and expose bare soil surfaces making these surfaces more susceptible to erosion. To comply with the requirements of the SWPPP, the Project must implement BMPs in accordance with NPDES requirements. This will reduce potential runoff, erosion, and siltation associated with construction and operation of the Project. The effects of the Project on onsite and offsite erosion and siltation, therefore, would be less than significant.

ii) Implementation of the Project would not result in the substantial increase of the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. The Project involves the removal and/or installation of new pipeline and related infrastructure. The new pipeline will be installed within the existing alley right-of way. With the implementation of BMPs, which may include but is not limited to the installation of berms or straw wattles during the construction phase and soil compaction and cover following infill of trenches, where necessary, the increase in surface runoff will be minimal. As such, the drainage pattern at the Project site, as well as surface runoff conditions after implementation of the Proposed Project, would not result in onsite or offsite flooding. Therefore, the Proposed Project would have a less than significant impact with regard to causing flooding onsite or offsite.

iii See discussion of Issues i) and ii), above. No known existing or planned stormwater drainage systems for urban development, such as bioswales or retention basins, are located within the Project site. However, the Project would not substantially increase stormwater flow nor interrupt stormwater flow to drainage facilities in the Project vicinity.

Polluted runoff from the Project site during construction and operation could include sediment from soil disturbances, oil and grease from construction equipment, and pollutants such as trash and debris. Compliance with the SWPPP would ensure that BMPs would be implemented during the construction phase to effectively minimize excessive soil erosion and sedimentation and

eliminate non-stormwater discharge off-site. As required by law, BMPs would be included as part of the Project to ensure that potentially significant impacts are reduced to less than significant levels. Therefore, impacts associated with stormwater volumes and polluted runoff during the construction of the Project would be less than significant.

Activities associated with operation of the Project would not contribute to stormwater flow or polluted runoff, as the Project is the replacement of waterlines and manholes and stormwater runoff would not be affected by these facilities. Further, upon completion of the construction phase, the soil surface in the alley will be returned to present conditions. Therefore, impacts during operation would be less than significant.

iv) FEMA flood hazard maps (FIRM Map 06007C0250E) shows that the Project site is not located within a 100-year flood zone. Project improvements would be underground or at ground level. Therefore, implementation of The Project will have no 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?	☐	☐	☐	☒

As discussed in Item c) above, the Project will not have an impact related to flooding.

The Project site is not protected by levees from any flood hazard. According to the DWR Dam Breach Inundation Map, the Project area is not within a dam inundation area (DWR 2020). There are no natural waterways on or in close proximity to the Project site and no large bodies of water exist near the Proposed Project site. The Project site is not located in an area which may be impacted by flooding due to dam failure. As such, the Project would have no impact from dam or levee failure.

Further, the Project site is not located within a potential tsunami or seiche inundation area. Damage due to a seiche, a seismic-induced wave generated in a restricted body of water would not occur.

Based on the discussion above, the Project would not result in the release of pollutants. There would be no 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?	☐	☐	☐	☒

The Project site is located within the Butte County Groundwater Management Plan (Butte County 2004). The Project is replacement of existing wastewater pipelines 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 in this area.

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 *Butte County 2030 General Plan* Land Use Designations map (2012) identifies the Project site as Medium Density Residential (up to 6 du/acre). Stirling City is a rural community that is home to approximately 200-300 residents. The wastewater pipeline currently runs underground within the community. The wastewater pipeline will remain within the alley/street ROW.

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?	☐	☐	☐	☒

The Project consists of the replacement of existing portions of an underground wastewater pipeline system. The Project would remain at or below ground level and would remain within the existing alley and street right-of-way. The pipeline improvements will occur for 2,700 linear feet within the existing ROW. The pipeline segment will continue to run between Diamond Street and Gypsum Street, parallel to Skyway Road. The pipeline will be installed underground and will not physically divide the community in any way. As such, 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?	☐	☐	☐	☒

The Project consists of the replacement of portions of an existing wastewater conveyance system. The pipeline alignment is located between Gypsum Street and approximately 100 feet past Diamond Street, parallel to Skyway Road. The pipeline segment will remain in its existing easement. No rezoning or General Plan amendments are required for the Project. The Project would not conflict with any applicable land use plan, policy or regulation. The installation of underground pipelines will not interfere with the use of land as designated and will not conflict with any land use plan, policy, or regulation. The new portion of pipeline is the replacement of an existing pipeline and ultimately would not interfere with the use of the land. As such, the Project would have no impact in this area.

4.11.3 Mitigation Measures

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

4.12 Mineral Resources

4.12.1 Environmental Setting

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

Neither the County'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 (DMR 2019, Butte County 2018).

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?	☐	☐	☐	☒

As discussed above, neither the County 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?	☐	☐	☐	☒

The Project site is not identified as a mineral resource recovery site by the County 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

The following information was obtained from the Stirling City Sewer Rehabilitation Project Noise Impact Technical Memorandum performed by ECORP Consulting Inc., in February 2020 (2020d). See *Appendix C* for this assessment.

4.13.1 Environmental Setting

Noise Fundamentals

Addition of Decibels

The decibel (dB) scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted (dBA)[4], an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound. When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions (Federal Transit Administration 2018). For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Under the dB scale, three sources of equal loudness together would produce an increase of 5 dB.

Sound Propagation and Attenuation

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 six dB (dBA) 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 three dBA for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dBA per doubling of distance is normally assumed.

Noise levels may also be reduced by intervening structures; generally, a single row of detached buildings between the receptor and the noise source reduces the noise level by about 5 dBA (FHWA 2008), while a solid wall or berm generally reduces noise levels by 10 to 20 dBA (FHWA 2011). However, noise barriers or enclosures specifically designed to reduce site-specific construction noise can provide a sound reduction

[4] A-weighting is applied to instrument-measured sound levels in an effort to account for the relative loudness perceived by the human ear, as the ear is less sensitive to low audio frequencies. It is employed by arithmetically adding a table of values, listed by octave or third-octave bands, to the measured sound pressure levels in dB. The resulting octave band measurements are usually added (logarithmic method) to provide a single A-weighted value describing the sound; the units are written as dB(A).

of 35 dBA or greater (WEAL 2000). To achieve the most potent noise-reducing effect, a noise enclosure/barrier must physically fit in the available space, must completely break the "line of sight" between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend length-wise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In general, barriers contribute to decreasing noise levels only when the structure breaks the line of sight between the source and the receiver.

The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more.

Noise Descriptors

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL (Community Noise Equivalent Level) 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.

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, 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 noise levels, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5 dBA is required before any noticeable change in community response would be expected.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Noise-Sensitive Land Uses

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 noise receptors include residences surrounding the site.

Existing Ambient Noise Environment

The existing ambient noise levels experienced within Stirling City are typical of a quiet, rural residential area. As previously described, rural residential noise levels generally range around 40 dBA CNEL.

4.13.2 Regulatory Framework

Butte County General Plan Health and Safety Element

The County of Butte Health and Safety Element of the General Plan establishes goals and policies addressing major noise sources within the community. The Project is predominately construction in nature in that it proposes the rehabilitation of existing sewage collection facilities. Once installation is complete it would not change the permanent use of the Project site or result in regular visits. The following provides the applicable goals, policies and criteria for evaluating the feasibility and potential noise impact associated with the Proposed Project:

- **Policy HS-P1.7**: Applicants for discretionary permits shall be required to limit noise-generating construction activities located within 1,000 feet of residential uses to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays and non-holidays.
- **Policy HS-P1.9**: The following standard construction noise control measures shall be required at construction sites in order to minimize construction noise impacts:
    a) Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
    b) Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
    c) Utilize quiet air compressors and other stationary noise-generating equipment where appropriate technology exists and is feasible.

County of Butte Municipal Code

The County of Butte Municipal Code, Chapter 41A, *Noise Control*, specifies additional noise regulations pertaining to construction noise. Section 41A-9, *Exemptions*, of this chapter exempts construction noise from numeric noise thresholds, provided construction activities do not take place between the following hours:

- Sunset to sunrise on weekdays and non-holidays;
- Friday commencing at 6:00 p.m. through and including 8:00 a.m. on Saturday, as well as not before 8:00 a.m. on holidays;
- Saturday commencing at 6:00 p.m. through and including 10:00 a.m. on Sunday; and,
- Sunday after the hour of 6:00 p.m.

4.13.3 Noise (XIII.) 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 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?	☐	☐	☒	☐

Project Construction

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of construction 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., building construction, paving). Noise generated by construction equipment, including earthmovers, material handlers, 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 receptors in the vicinity of the construction site.

Table 4.13-1 indicates the anticipated noise levels of construction equipment. The average noise levels presented in *Table 4.13-1* are based on the quantity, type, and acoustical use factor for each type of equipment that is anticipated to be used.

Table 4.13-1. Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Noise (L_{max}) at 50 Feet (dBA)	Maximum 8-Hour Noise (L_{eq}) at 50 Feet (dBA)
Crane	80.6	72.6
Dozer	81.7	77.7
Excavator	80.7	76.7
Generator	80.6	77.6
Grader	85.0	81.0
Other Equipment (greater than 5 horsepower)	85.0	82.0
Paver	77.2	74.2
Roller	80.0	73.0
Tractor	84.0	80.0
Dump Truck	76.5	72.5
Concrete Pump Truck	81.4	74.4
Welder	74.0	70.0
Crane	80.6	72.6
Dozer	81.7	77.7

Source: FHWA, Roadway Construction Noise Model (FHWA-HEP-05-054), dated January 2008.

As previously stated, the nearest noise-sensitive land uses consist of residences surrounding the site. The noise levels from construction equipment at 50 feet range from 70.0 dBA to 81.0 dBA. Thus, the noise levels from construction equipment could be experienced at these residences at levels exceeding 85.0 dBA.

The County does not promulgate numeric thresholds pertaining to the noise associated with construction but instead limits the time that construction can take place. Specifically, Section 41A-9, *Exemptions*, of this

chapter exempts construction noise from numeric noise thresholds, provided construction activities do not take place between the following hours:

- Sunset to sunrise on weekdays and non-holidays;
- Friday commencing at 6:00 p.m. through and including 8:00 a.m. on Saturday, as well as not before 8:00 a.m. on holidays;
- Saturday commencing at 6:00 p.m. through and including 10:00 a.m. on Sunday; and,
- Sunday after the hour of 6:00 p.m.

It is typical to regulate construction noise in this manner since construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Additionally, construction would occur throughout Stirling City and would not be concentrated at one point. Therefore, noise generated during construction activities, as long as conducted within the permitted hours, would not exceed County noise standards.

Project Operations-Onsite Noise Sources

The Project proposes the rehabilitation of existing sewage collection facilities. The Proposed Project will not include the provision of new permanent stationary or mobile sources. Thus, it would not be a source of operational mobile or stationary noise sources.

Based on the above analysis, the Project would have a less than significant impact regarding the generation of a substantial temporary or permanent increase in ambient noise levels.

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

Construction 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 noted that pile drivers would not 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 4.13-2*.

Table 4.13-2. Vibration Source Amplitudes for Construction Equipment

Equipment Type	Peak Particle Velocity at 20 Feet (inches per second)
Large Bulldozer	0.124
Caisson Drilling	0.124
Loaded Trucks	0.106
Rock Breaker	0.115
Jackhammer	0.049
Small Bulldozer/Tractor	0.004

Source: FTA 2018; Caltrans 2013b

The County does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans's (2013) recommended standard of 0.2 inches per second peak particle velocity with respect to the prevention of structural damage for residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

As previously stated, construction activities would occur throughout the Project Site and would not be concentrated at the point closest to the nearest structure. The nearest structures of concern to the construction site are located approximately 20 feet away, adjacent to where the new drive isle and parking are proposed to be located. Based on the vibration levels presented in *Table 4.13-2*, ground vibration generated by heavy-duty equipment would not be anticipated to exceed approximately 0.124 inches per second peak particle velocity at 20 feet. Thus, nearby structures would not be negatively affected.

Project Operations

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels.

Based on the above analysis, the Project would have a less than significant impact regarding the generation of excessive groundborne vibration or groundborne noise levels.

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

The Project site is located approximately 14 to 18 miles from the nearest airstrip and is located outside of any airport land use plan. Since the site is outside any land use plan boundaries it is beyond the noise contours generated by airport operations. The Proposed Project will not expose people working on the Project to excess airport noise levels. The Project would have no impact in this area.

4.13.4 Mitigation Measures

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

4.14 Population and Housing

4.14.1 Environmental Setting

According to the DOF, which provides estimated population and housing unit demographics by year throughout the state, the County's population increased 2.89 percent between 2010 and 2019, from 220,000 to 226,466 (DOF 2019). Because of the Camp Fire disaster, the County's population increased significantly during the last two months of 2018. DOF estimates that there were 85,447 total housing units in the County, and a 7.0 percent vacancy rate as of January 1, 2019 (DOF 2019).

Stirling City alone is not included in the DOF population and housing unit demographics. Stirling City is located in the 95978 zip code. According to the United States Zip Codes (2020), the 95978 zip code covers an area of 6.33 square miles, much greater than the Stirling City area. According to the U.S. 2010 Census, the 95978 zip code had a 2010 population of 143 persons (U.S. Census 2010). The exact population of Stirling City is unknown; however, the community is the only established community within this zip code.

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)?	☐	☐	☐	☒

The Project does not include the construction of any new homes. Development of the Project would not extend any roads or public infrastructure. Therefore, direct or indirect increases in population growth would not occur as a result of the Project. There is no impact to population growth.

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 persons or residences would be displaced or removed as a result of the 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.

Police Services

Police protection services at the project site are provided by the Butte County Sheriff's Office (BCSO). The BCSO is responsible for law enforcement, criminal investigation, and crime prevention in the unincorporated areas of the county, including Stirling City. The BCSO is also the countywide coordinator for mutual aid situations and maintains mutual aid agreements with the California Highway Patrol and the municipal police departments. The BCSO has its main office in Oroville, with sub-stations in Chico and Magalia. The BCSO is responsible for operating the County Jail, which is utilized by all law enforcement agencies within Butte County (Butte County 2010).

Fire Services

Fire protection services for the Project area are provided by Station 13, the Stirling City Volunteer Fire Department of Butte County CAL FIRE. The Stirling City Volunteer Fire Department provides fire, rescue, emergency medical, public service, and hazardous materials emergency response service for the community. This includes fire prevention, pre-fire planning, emergency preparedness, firefighting, fire investigation, and code enforcement. The department houses one type 3 fire engine, has two fire captains, and seven firefighters. The department responds to approximately 200 calls per year. The department's

range of protection includes the community of Stirling City and private land including Sierra Pacific Industries in the farthest northern parts of Butte County (Butte County 2019a).

Schools

The Horace L. Brakebill School is located within the Stirling City community but is usually closed due to low enrollment. Residents must travel to nearby communities, including Lovelock, Forest Ranch, and Magalia to attend public school. Cedarwood Elementary School in Magalia typically offers education services to children living in Stirling City.

Parks

The community has one park, Clotilde Merlo Park, which is funded by the Harry A. Merlo Foundation, Inc.

Other Public Facilities

The small community of Stirling City does not have a public library. The Paradise branch of the Butte County Library is located approximately 16 miles south of Stirling City at 5922 Clark Rd, Paradise, CA 95969.

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?	☐	☐	☐	☒

The Project consists of the replacement of portions of an existing wastewater pipeline and manholes along the road and alley right-of-way, in addition to lateral connection repairs.

The proposed pipeline would be maintained by Butte County and would not require government public services beyond existing conditions. The Project would not result in an increase in population which in turn would impact public facilities. The Project would have a less than significant impact in this area.

The Project, maintenance and improvements to the wastewater conveyance system maintained by Butte County, would not increase the need for fire or police protection within Stirling City. Upon completion of improvements, the wastewater conveyance system shall continue to serve the same purpose and function essentially the same as it does under current conditions. The Project would not significantly increase fire or safety risks. As such, the Project would have a less than significant impact on fire and police protection.

No regularly operating public schools exist within Stirling City. The Project would not impact the one park in Stirling City during the construction phase. During the operational phase, the Project would also have no impact on the park. Further, upon completion of the Project, the pipelines will be located underground within their existing right of way. Additional minor improvements will be located away from the park.

Furthermore, Stirling City does not have a public library or other public facilities. As such, the Project would have no impact on other public facilities.

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, one park is located within the community. The park is privately owned and not maintained by the Stirling City.

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?	☐	☐	☐	☒

The need for additional parkland is primarily based on an increase in population to an area. Given that the 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 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 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?	☐	☐	☐	☒

The Project would not result in the construction of recreational facilities. The Project would not require the construction or expansion of additional offsite recreational facilities. As such, the 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

Personal Vehicles

Regional access to the Project site is provided by Skyway, which links the site with other Northern California communities and cities to the south and the west. Transportation throughout Stirling City and the Project area is provided by county and private roads. Travel by car is the primary means of transportation within the community. Utilizing public transit systems, biking, or walking are other available modes of transportation.

Transit Service

Stirling City does not have public bus service. Butte County Association of Governments (BCAG) provides bus service to the surrounding areas via the B-Line busses. The nearest B-Line bus stops are located in Magalia (B-Line 2019).

Pedestrian and Bicycle Facilities

The streets of Stirling City typically experience low levels of traffic and generally have wide shoulders, enabling pedestrians and cyclists to utilize the roadways in a safe manner. Formal pedestrian and bicycle facilities are not designated.

Project Nexus to Transit Systems

The Project is the replacement of approximately 2,700 feet of a 5,500-foot long wastewater conveyance pipeline, replacement of manholes, and re-establishment of existing lateral connections to the proposed sewer main. All construction will occur within the existing right-of-way of streets and alleys.

The construction phase of the Project will result in disturbance of unpaved alleys and roadways that experience low levels of traffic. Upon completion of the construction phase, all trenches will be backfilled with a mixture composed of existing native soils, spoil material, and/or intermediate backfill with native material with 95 percent relative compaction with no particles larger than six inches in maximum dimension. The fill material, any asphalt, and any required sidewalk, or curb and gutter cuts will be repaired per County standards

The Project involves repairing the existing wastewater conveyance system. The Project is not expected to directly or indirectly attract more development nor residents to the Project area. As such, the Project would not 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?	☐	☐	☒	☐

The 2030 Butte County General Plan Circulation Element provides guidance in the County for existing and future transportation facilities (Butte County 2018). The Project construction is to take place over the course of 22 weeks, beginning in early spring of 2021. Portions of the pipeline ROW in the alley and the seven cross streets between Skyway Road and Manzanita Road will be unusable during parts of the construction phase. However, this impact will be temporary and alternative routes will be available for use by school buses, personal vehicles, bicycles, and pedestrians. Thus, the impact to the community's circulation system is less than significant.

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)?	☐	☐	☒	☐

CEQA Guidelines Section 15064.3, subdivision (b) provides criteria for analyzing transportation impacts based on a vehicle miles traveled (VMT) methodology instead of the now superseded (as of January 1, 2019) LOS methodology. Pertinent to the Proposed Project are those criteria identified in § 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."

Butte County does not currently have VMT thresholds or guidelines. However, Project is the rehabilitation of an existing underground wastewater pipeline, and as such the Project will not significantly impact VMT. As shown in *Figure 3. Project Site Plan*, the wastewater pipeline right-of way crosses portions of Gypsum Street, Mica Street, Slate Street, Lava Street, Granite Street, Quartz Street, and Diamond Street. As such, use of each of these streets will be temporarily interrupted during certain stages of Project construction. However, the construction phase is limited to 22 weeks starting in early spring. Of those 22 weeks, 14 weeks will consist of active construction. During this time, traffic will be redirected to alternative routes which will follow the shortest open path of travel. The use of alternative routes may temporarily result in the slight increase of VMT for community residents. However, the increase in VMT would be temporary in duration and minimal in scale, this is considered a less than significant impact.

During operation, the Project will not negatively impact the existing vehicle roadway network or VMT. Thus, the Project will have a less than significant impact in this area.

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

No modifications to roadway features are proposed as part of the Project. The Project would replace existing underground pipeline and result in minimal work outside of the existing pipeline right-of-way in the alley. No long-term modifications to roadway features are proposed as part of the Project. Traffic disruption may occur during project construction. However, the construction phase is limited to 22 weeks starting in early spring. Of those 22 weeks, 14 weeks will consist of active construction. Construction will be timed in a manner so that alternative routes are available as necessary between Skyway and Manzanita Road. The Project would have a less than significant 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 Appendix, an "existing stop along a high-quality transit corridor" may include a planned and funded stop that is included in an adopted regional transportation improvement program.

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

The Project would replace portions of an existing wastewater pipeline and involve other minor improvements to the underground wastewater conveyance system. No long-term modifications to roadway features are proposed as part of the Project and, therefore would not result in any long-term adverse impacts on emergency access during the operational phase.

Traffic disruption may occur during Project construction. The 2030 General Plan identifies the Skyway as the primary evacuation route for Stirling City and surrounding communities (Butte County 2009). The Project construction and operation will not interrupt use of Skyway. Further, alternate routes will be made available between Skyway and Manzanita Road as necessary. Thus, the emergency service providers will be well informed of the Project construction and appropriate measures for emergency access will be established prior to any emergency. Therefore, the Project would not result in inadequate emergency and have a less than significant 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 the ECORP Historic Property Identification Report: Cultural Inventory and Evaluation (2020c) for the 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 and their ethnographic history in the Project area.

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. California's indigenous groups are unique and as such were classified as belonging to the California culture area. California's cultural area was subdivided into four subculture areas: Northwestern, Northeastern, Southern, and Central. The Central area encompasses the current Project Area and includes the Maidu and Konkow.

The current Project Area falls within the ethnographic tribal territory of the Maidu, located in the lower foothills of the western slopes of the Sierra Nevada range and in the periphery of the Northern Sacramento Valley. 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). Because many believe the Mountain Maidu and Konkow to be so closely related, ethnographers tended to group them as one.

The Konkow occupied territory located immediately adjacent and to the southwest of the Mountain Maidu, along the Feather and Sacramento rivers, to their southern boundary at the Sutter Buttes. The Konkow were primarily located in the lower elevations of the Sierra Nevada and along the valley floor. Tribal territories adjacent to the Maidu and Konkow included the Atsugewi and Yana to the north, the Nomlaki and Patwin to the west, the Paiute and Washoe to the east, and the Nisenan to the south.

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 called themselves *ko'yo-mkawi*, or "meadowland".

Settlement patterns of the Maidu and Konkow were seasonal in nature. The Konkow inhabited a savanna-like habitat on the valley floor and in the lower elevations of the Sierra Nevada foothills. Resources exploited in this environment include wild rye, pine nuts, acorns, fish, and invertebrates. Summer hunting trips into the mountains provided deer meat, skins, and other items for food, clothing, and shelter for the winter months.

The village community was the primary settlement type among the Maidu and 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. The Mechoopda Village, formerly located near downtown Chico, was home to many Maidu well into historical times.

Among the villages, the male occupant of the largest *kum*, or semi-subterranean earth-covered lodge, governed the community. Two other types of ethnographically documented structures in use included the winter-occupied conical bark structure and the summer shade shelter.

Clothing, accessories, and other personal items were manufactured using elaborate basket-weaving techniques, shell and bone ornamenting, and by incorporating feathers, game skins, plant roots, and stems into objects. Shell, in the form of beads for currency or as valuable jewelry, was very desirable and was exchanged for food, obsidian, tobacco, and pigments.

Contact between the Maidu 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, 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 plummeted 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, after which 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 Mechoopda Indian Tribe in Chico; 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 records search, ECORP contacted the California Native American Heritage Commission (NAHC) on November 26, 2019 to request a search of the Sacred Lands File for the APE. The search of the Sacred Lands File (SLF) by the NAHC failed to indicate the presence of Native American cultural resources in the project area.

The results of the SLF search were received by ECORP on December 2, 2019. Following the SWRCB prescribed process for CEQA-Plus projects, ECORP contacted all persons or organizations on the NAHC list by letter on January 2, 2020 to request information on unrecorded cultural resources that may exist within the current Project Area, or to inquire about any concerns regarding sacred sites or traditional cultural properties in the vicinity that might be affected by the proposed action. Each individual was subsequently telephoned on January 08, 2020 to ensure that the materials had been received and to further solicit comments. No responses to the follow-up letters or phone calls to individual tribal entities were received as of the preparation of this document.

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

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	☐	☒	☐	☐

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

No known tribal cultural 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. A search of the Sacred Lands File conducted by the NAHC failed to indicate the presence of Native American cultural resources in the project area.

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** in Section 4.5.2.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

Water Service

The Del Oro Water Company serves several unincorporated areas outside of Paradise, including Stirling City, Magalia, and Upper Stilson Canyon. The Del Oro Water Company has several districts. Stirling City is served by the Stirling Bluffs District.

The Stirling Bluffs District is approximately 1.35 square miles, with 164 metered service connections. Water use in the area is primarily residential. Stirling Bluffs has a contract to receive up to 365 acre-feet per year of water from PG&E through the Hendrick Canal. The remaining water from Stirling Bluffs is available for transfer to Paradise Reservoir, which Paradise Irrigation District treats and wheels to Paradise Pines or Magalia. In 2015, of the 365 acre-feet, approximately 327 acre-feet was available to transfer. In 2015, Paradise Pines received 192.50-acre feet and Magalia received 39.95 acre-feet. This water can also be wheeled to Lime Saddle in an emergency (Butte County 2016, Del Oro Water Company 2016).

Wastewater

The County of Butte operates and maintains (O&M) the wastewater collection and treatment system for a portion of the community of Stirling City under the authority of County Service Area 82 (CSA 82).

The system was constructed in the late 1940's or early 50's. CSA 82 was formed in 1981 to take over the operation and maintenance functions from Stirling City Sewer Maintenance District. The County has replaced approximately half of the 5,500-foot collection system. 2,700 feet is the original clay pipe. The County began the process of rehabilitating the lower end of the collection several years ago, but due to a lack of resources has not been able to complete the system rehabilitation for the upper portion of the system. Further, the septic tanks at the treatment ponds were replaced in 2006.

The Proposed Project would replace the 2,700 feet of dilapidated original clay pipe, replace the manholes to meet standards, and restore connections to the proposed sewer main.

Storm Drainage

Butte County is responsible for managing stormwater in Stirling City, an unincorporated area of Butte County. Stormwater management specifications are outlined in the Butte County Storm Water Management Program (2003). The County operates and maintains storm drainage systems that consist of hundreds of miles of open drainage ditches, pipe, and several detention basins. The Department of Public Works is responsible for the County's storm water drainage conveyance system. The drainage facilities include gutters, swales, ditches, culverts, storm drain inlets and outfalls, catch basins, storm drainage pipes, canals, detention basins, and pump stations.

The Department of Public Works and the Development Services Department are involved with development review to ensure that public and private projects include the necessary control measures for erosion and sediment control, as well as permanent features to minimize storm water pollution from development projects. The two departments also ensure proper permits are received for projects. The drainage systems of Butte County discharge into Butte County's waterways and eventually flow into Sacramento Valley waterways (Butte County 2003).

Solid Waste

The Butte Regional Waste Management Authority (BRWMA) regulates waste collection and recycling services in the cities of Biggs and Gridley, and in the unincorporated areas of Butte County; including Stirling City. As shown in *Table 4.19-1*, the majority of the BRWMA's solid waste is taken to the Neal Road landfill in Butte County. The Neal Road Landfill has a cease operation date of January 1, 2048

Table 4.19-1. Solid Waste Disposal Facilities Used by the Butte Regional Waste Management Authority

Destination Facility	Solid Waste Disposal (tons/year)			Landfill Information		
	2015	2016	2017	Remaining Capacity (cubic yards)	Remaining Capacity Date	Cease Operation Date
Altamont Landfill	32	34	21	65,400,000	12/31/2014	1/1/2025
Anderson Landfill Inc.	6	10	-	7,184,701	3/1/2017	12/1/2023
Forward Landfill Inc.	3	16	-	22,100,000	12/3/2012	1/1/2020
L and D Landfill	7	24	1	4,100,000	5/31/2005	1/1/2023
Neal Road Recycling and Waste Facility	68,201	78,211	88,130	20,874,970	7/1/2009	1/1/2048
North County Landfill and Recycling Center	-	78	1	35,400,000	12/31/2009	12/31/2048
Potrero Hills Landfill	4	-	173	13,872.000	1/1/2006	2/14/2048
Recology Hay Road	-	19	7	30,433,000	7/28/2010	1/1/2077
Recology Ostrom Road LF Inc.	4,620	1,399	9,085	39,223,000	6/1/2007	12/31/2066
Sacramento County Landfill	329	39	204	112,900,000	9/12/2005	1/1/2064
Western Regional Landfill	812	3	12	29,093,819	6/30/2005	1/1/2058
West Central Landfill	-	8	-	22,100,000	12/31/2012	1/1/2020
Yolo County Central Landfill	-	1	2	NA	NA	1/1/2081
Yearly Total	74,006	79,764	97,635			
Average per Resident (lbs/day)	4.4	4.9	5.8			
Average per Employee (lbs/day)	27.2	28.8	33.2			

Source: CalRecycle 2019a, 2019b, and 2019c

Electricity

Toadtown Powerhouse of Pacific Gas and Electric (PG&E), located in Magalia, supplies electricity to the community of Stirling City. The Toadtown Powerhouse is one of three powerhouses located in the Butte Creek and West Feather River drainages, which together comprise the DeSabla-Centerville hydroelectric Project (PG&E 2020). 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.

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?	☐	☐	☐	☒

Water

Replacement of existing wastewater supply pipelines and related improvements would not result in the need for additional water supplies or expanded water facilities. The Project would have no impact in this area.

Wastewater

The Project is the replacement of portions of existing wastewater pipeline and improvements to the wastewater system as needed. The completion of the Project will eliminate an existing need for improvements to the wastewater conveyance system. No new or expanded wastewater treatment facilities are required to serve the wastewater conveyance system improvements. The Project would have no impact in this area.

Storm Drainage

The project will not require the addition of permanent stormwater drainage beyond implementation of Best Management Practices (BMPs) during the construction phase. The Project would have no impact in this area.

Electric Power

Replacement of existing wastewater pipelines and manholes 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

Replacement of and construction of new water pipelines 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. 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) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒

Replacement of existing wastewater pipelines and related wastewater system improvements 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?	☐	☐	☐	☒

Implementation of the Project would not result in additional wastewater capacity as no additional demand would result from the wastewater pipeline replacement and wastewater conveyance system 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?	☐	☐	☒	☐

No additional recycling or solid waste disposal capacity would be required for operation and maintenance of the Project. Construction is expected to produce solid waste, but the amount of construction debris requiring disposal would be minor and production of solid waste would only occur during the construction period (e.g., cardboard, wood scraps, plastic straps). Project operation would not produce solid waste, as the purpose of the Project is to convey wastewater underground from domestic sources to a wastewater treatment facility. 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?	☐	☐	☒	☐

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.

Fire protection services for the Project area are provided by Station 13, the Stirling City Volunteer Fire Department of Butte County CAL FIRE. The Stirling City Volunteer Fire Department provides fire, rescue, emergency medical, public service, and hazardous materials emergency response service for the community (Butte County 2019a). The community is a fire threatened community with a hazard level of three- high threat, according to the Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan (Butte County 2007).

The California Department of Forestry and Fire protection (CAL FIRE) has designated the Project site as being within an area having a very high wildland fire potential in a state responsibility area (SRA) (CAL FIRE 2007). The nearest major fire to the Project site was the Camp Fire, which burned 153,336 acres to the south of Stirling City in summer of 2018 (CAL FIRE 2019).

The Project site is largely developed for commercial use and residential use along private and county roadways. The Project area does not include steep slopes, but does support highly flammable vegetation- a major risk factor for wildfire.

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?	☐	☐	☒	☐

The Project is located in a state responsibility area and is located in a very high fire hazard severity zone. However, the Project is for the rehabilitation of the existing wastewater conveyance system in Stirling City. The Project will not require construction in the right-of-way of Skyway; the primary emergency access and evacuation route for the community. Emergency services will be notified of any potential interruption of access due to construction activities. Once construction is complete, the operation of the underground sewage system will not impair or impede emergency response or evacuation. As such, the Project would have a less than significant impact on an emergency response plan or emergency evacuation plan.

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?	☐	☐	☒	☐

The Project is located in a state responsibility area and is located in a very high fire hazard severity zone. However, the Project is the replacement and repair of an existing wastewater conveyance system. The Project will not increase occupancy of the Project area. The Project will not contribute to exacerbated wildfire risk, including in terms of pollutant concentrations and uncontrolled spread of wildfire. The Project would have a less than significant 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?	☐	☐	☒	☐

The installation of wastewater pipelines and related infrastructure is not expected to impose any fire risk. The Project will not require the installation or maintenance of non-wastewater infrastructure. The Project would have a less than significant 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?	☐	☐	☒	☐

The Project area is relatively level and is not expected to contribute to post-fire slope instability or drainage changes or flooding or landslides due to runoff. The majority of the Project will occur underground in the existing wastewater pipeline right of way. Thus, the Project would have a less than significant 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 Section 4.4 Biological Resources and Section 4.5 Cultural Resources, the Project would have potential impacts to these resources. However, with implementation of mitigation measures **BIO-1**, **BIO-2**, and **CUL-1** proposed in the relevant sections of this IS/MND, 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)?	☐	☐	☐	☒

The Project is the repair and replacement of existing wastewater collection facilities. Implementation of the Proposed Project would not result in any cumulative impacts but is the mere continuation of existing conditions. The Project would have no impact in this area.

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 Project is the repair and replacement of existing wastewater infrastructure. While the Project may cause short-term annoyances because of short periods of construction, these are not considered to be substantial or adverse. Therefore, direct and indirect impacts to human beings would be less than significant.

5.0 COMPLIANCE WITH FEDERAL REGULATIONS

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

5.1 Clean Air Act

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

Established under the 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.

Predicted annual construction-generated emissions for the Proposed Project are summarized in Table 5.1-1. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the Conformity Determination thresholds.

As shown in *Table 5.1-1*, projected emissions resulting from the Project fall below the EPA Conformity Determination thresholds of 100 tons per year for all pollutants. The Project would not generate emissions during operations.

Table 5.1-1. Construction-related Emissions (EPA Conformity Determination Analysis)

Construction	Pollutant (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Project Construction	0.1	1.3	1.1	0.0	0.1	0.1
EPA Conformity Determination Thresholds (40 CFR 93.153)	*100*	*100*	*100*	*100*	*100*	*100*
Exceed EPA Conformity Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions calculations account for the trenching of 5,500 linear feet for the installation of replacement pipelines and 900 linear feet for the installation of new laterals. Emissions modeling accounts for the hauling of 300 cubic yards of native soil export and 300 cubic yards of soil import. Emissions modeling also accounts for the demolition of 462.8 tons of existing roadway and hauling this material from the construction site.

5.2 Coastal Barriers Resources Act

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

5.3 Coastal Zone Management Act

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

5.4 Endangered Species Act

The federal ESA (16 USC 1531 et seq.) and subsequent amendments establish legal requirements for the conservation of endangered and threatened species and the ecosystems upon which they depend. The ESA is administered by the USFWS for terrestrial species, and by the National Marine Fisheries Service (NMFS) for marine species and anadromous fish. Under the federal ESA, the USFWS or NMFS may designate critical habitat for listed species. Section 7 of the federal 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, seven sensitive bird species have moderate to low potential to occur within the Survey Area based on current site conditions and habitat characteristics. These are: sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*A. cooperii*), Nuttall's woodpecker (*Picoides nuttallii*), Williamson's sapsucker (*Sphyrapicus thyroideus*), olive-sided flycatcher (*Contopus cooperi*), oak titmouse (*Baelophus inornatus*), and Cassin's finch (*Haemorhous cassinii*).

The Project has potential to impact nesting birds that are protected under the federal ESA. Nests in close proximity to work areas may be disturbed. Due to the potential for protected species to occur within the Project area, mitigation measures **BIO-1** and **BIO-2** shall be incorporated to reduce the potential impacts to nesting ESA-protected birds to less than significant. With mitigation incorporated, the Project would not have the potential to violate the ESA.

5.5 Environmental Justice

In 1994 President Clinton issued the Executive Order (EO), 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).

Table 5.1-2 shows Year 2017 (most recently published) minority and low-income population percentages for the affected region. No census information is available for Stirling City alone.

Table 5.1-2. Year 2017 Minority and Low-Income Population Percentages for the Affected Local and Regional Areas

Jurisdiction Minority	Minority Population Percentage	Percentage of Families Below the Poverty Level	Percentage of Individuals Below the Poverty Level
California	42.4	10.6	15.1
Butte County	18.1	12.0	20.5

Source: U.S. Census 2017

As shown, Butte County has a low minority population and a high low-income population compared to the State of California. However, 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 pipelines that are at or beyond limit of the design lifetime and are in a state of disrepair. 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 0.5-mile surrounding area. Therefore, the Project does not involve any activity that is likely to be of interest to or could have a disproportionate impact upon indigenous populations or tribes.

5.6 Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the contribution of federal programs to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It does not authorize the federal government to regulate the use of private land or lands not under federal jurisdiction, or in any way affect the rights of property owners. Under the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland; however, it cannot be open water or urban built-up land. Because the Project is located entirely within the built-out urban environment of the community and no farmland occurs in the Project area, the FPPA does not apply to the Project.

5.7 Flood Plain Management

Executive Order (EO) 13690, "The Federal Flood Risk Management Standard" (January 30, 2015) revises EO 11988, "Floodplain Management" (May 24, 1977), and directs federal agencies to take the appropriate actions to reduce risk to federal investments, specifically to "update their flood-risk reduction standards." The goal of this directive is to improve the resilience of communities and federal assets against the impacts of flooding and recognizes the risks and losses due to climate change and other threats The FEMA's 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 not located within a 100-year flood hazard area (FEMA 2008) and would not impede or redirect flood water flows. Therefore, no impacts related to flood hazards or flood water flows would occur.

5.8 National Historic Preservation Act

The NHPA of 1966, as amended sets forth the responsibilities that federal agencies must meet in regard to cultural resources, especially in regard to Section 106 as set forth in the regulations (36 CFR Part 800). Federal agencies must conduct the necessary studies and consultations to identify cultural resources that may be affected by an undertaking, evaluate cultural resources that may be affected to determine if they are eligible for the NRHP (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 (2020c), 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 the proposed wastewater pipeline, manholes, and other elements described in the official Project description. The horizontal APE represents the survey coverage area. It measures approximately 3,700 linear feet.

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 includes all subsurface areas where archaeological deposits could be affected. The subsurface vertical APE varies across the project, depending on how deep the existing wastewater pipes are currently located. This study assumes trenching will not exceed 12 feet below surface. 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 is described also 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. For the current Project, the above-surface vertical APE is not expected to extend past the current street surface, as there are no plans to build anything above-ground.

Thirteen previous cultural resources investigations have been conducted within 0.5 mile of the Project Area, covering 50 percent of the total area surrounding the Project Area within the record search radius (*Table 4.5-1*). These studies revealed the presence of six historic-period resources and one pre-contact resource. The previous studies were conducted between 1984 and 2015.

The results of the records search indicate that the Stirling City Fire Station parcel had been previously recorded in 1994 as part of CAL FIRE's inventory and evaluation of all CAL FIRE buildings in California;

however, a complete archaeological survey of the entire APE had not been conducted. In addition, the architectural inventory was conducted in 1994 and is out of date, and only included a small portion of APE; therefore, a pedestrian survey of the entire APE was warranted.

The records search also determined that seven previously recorded cultural resources are located within 0.5 mile of the Project Area (*Table 4.5-1*). Six of the resources are historic-period and consist of canals, ditches, a can dump, trestle footing, a sewer pond, and the Stirling City Forest Fire Station. One of the previously recorded resources is a pre-contact lithic scatter located south of Stirling City. All resources are located outside of the Project area with exception of the Stirling City Forest Fire Station. Of the fire station buildings, the Ranger's Residence was determined eligible for the NRHP as an individual property through a survey evaluation, and the Residence Garage and Residence Electrical House were determined eligible for the NRHP as a contributing element to a NRHP-eligible district through a survey evaluation. However, the pipeline improvements will have a less than significant impact on the fire station.

As a result of the field survey completed for the Cultural Resources Inventory and Evaluation Report, 7 historic-period road segments were identified and recorded. As shown, the Cultural Resources Inventory determined that none of road segments meet NRHP or CRHR eligibility criteria as individual resources. Ultimately, the Cultural Resources Inventory concluded that no designated historic properties, buildings, nor roadways will be affected by the Proposed Project.

5.9 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) (Public Law 104-267) passed in 1976 and was amended by the Sustainable Fisheries Act of 1996 (Public Law 104-297) and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act in 2007. The MSA, as amended, governs marine fisheries management in U.S. federal waters out to 200 nautical miles from shore and encourages "long-term biological and economic sustainability of our nation's marine fisheries." The goals of the MSA are to prevent overfishing, to rebuild overfished stocks, to increase long-term economic and social benefits, and to ensure a safe and sustainable supply of seafood. The act is in place to protect our natural resources, to maximize the possible use of these resources, and to make sure the use of marine resources is done in a safe manner. Amendments to the 1996 MSA require the identification of Essential Fish Habitat (EFH) for federally managed species and the implementation of measures to conserve and enhance this habitat. Any project requiring federal authorization is required to complete and submit an EFH Assessment with the application and either show that no significant impacts to the essential habitat of managed species are expected or identify mitigations to reduce those impacts. Under the MSA, Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 USC § 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 Project is over 120 miles inland and would not affect any fisheries or EFH. The MSA does not apply to the Project.

5.10 Migratory Bird Treaty Act

The MBTA of 1918 (16 USC 703-711) prohibits take of any migratory bird, including eggs or active nests, except as permitted by regulation (e.g., licensed hunting of waterfowl or upland game species). Under the MBTA, "migratory bird" is broadly defined as "any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle" and thus applies to most native bird species. As described in Section 4.4 (Biological Resources), birds protected under the MBTA could nest within roadside trees and within landscape vegetation adjacent to the site. Nests have potential to be disturbed during construction. As such, mitigation measure **BIO-1** 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-2** 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-1** and **BIO-2** would ensure the Project does not violate the MBTA.

5.11 Protection of Wetlands

The purpose of EO 11990 (May 24, 1977) is to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." To meet these objectives, EO 11990 requires federal agencies, in planning their actions, to consider alternatives to wetland sites and limit potential damage if an activity affecting a wetland cannot be avoided. EO 11990 applies to: acquisition, management, and disposition of federal lands and facilities construction and improvement projects which are undertaken, financed, or assisted by federal agencies; and federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulation, and licensing activities. As described in Section 4.4 (Biological Resources), the Proposed Project is in an urbanized environment and but does contain federally protected wetland habitats as defined by Section 404 of the Clean Water Act. The National Wetland Inventory (NWI) identifies one freshwater pond and two riverine features near the biological resource survey area. An unnamed ephemeral drainage runs north to south east of town, and a seasonally inundated pond fills from it. Another riverine feature occurs southwest of the Survey Area outside the town limits. No wetland features are located within or adjacent to the Project site. As such, the Project will not significantly impact protected wetlands.

5.12 Safe Drinking Water Act, Sole Source Aquifer Protection

The Safe Drinking Water Act of 1974 (SDWA) was established to protect the quality of drinking water in the U.S. This law focuses on all waters actually or potentially designed for drinking use, whether from above ground or underground sources. The SDWA authorizes 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 Project would be located in the community of Stirling City, California. Designated

sole-source aquifers in Region 9 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 2016). Therefore, the SDWA does not apply to the Project.

5.13 Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act (16 USC Section 1271 et seq.) establishes a National Wild and Scenic Rivers System (NWSRS) for the protection of rivers with important scenic, recreational, fish and wildlife, and other values. Rivers are classified as wild, scenic, or recreational. The Act designates specific rivers for inclusion in the System and prescribes the methods and standards by which additional rivers may be added. There are no wild and scenic rivers within the vicinity of the Proposed Project. The nearest designated wild and scenic river in the NWSRS is the Middle Fork of the Feather River, located more than 20 miles southeast of the community (NWSRS n.d.). Therefore, no portion of the Project is located within or near a designated wild and scenic river.

6.0 ALTERNATIVES

While an alternatives analyses is not generally required for IS/MNDs, the DWSRF 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 Project also is federally funded and as such must comply with NEPA requirements. NEPA requires an alternatives analysis be performed for a Project.

The alternatives analysis consists of the following components: an overview of CEQA requirements for alternatives analysis, descriptions of the alternatives evaluated, a comparison between the anticipated environmental effects of the alternatives and those of the Proposed Project, and identification of an environmentally superior alternative.

6.1 Introduction

6.1.1 CEQA Requirements for Alternatives

CEQA Guidelines Section 15126 requires that a reasonable range of alternatives to a proposed project that can attain most of the basic project objectives but has the potential to reduce or eliminate significant adverse impacts of the proposed project and may be feasibly accomplished in a successful manner, considering the economic, environmental, social, and technological factors involved. An alternatives analysis must evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6(a), (d) and (e)). If certain alternatives are found to be infeasible, the analysis must explain the reasons and facts supporting that conclusion.

Section 15126.6(d) also requires that, if an alternative would cause one or more significant effects in addition to those caused by a proposed project, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. One of the alternatives analyzed must be the "No Project" alternative (CEQA Guidelines Section 15126.6(e)). The analysis must also identify alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and should briefly explain the reasons underlying the lead agency's determination (CEQA Guidelines Section 15126.6(c)).

CEQA Guidelines Section 15126.6(e)(2) requires that the alternatives analysis identify the environmentally superior alternative. If that alternative is the No Project Alternative, the analysis shall also identify an environmentally superior alternative among the other alternatives. The environmentally superior alternative is discussed in Section 6.3.

6.1.2 Development of Project Alternatives

This section discusses the reasoning for selecting and rejecting alternatives. This section also summarizes the assumptions identified for the alternatives. The range of alternatives included for analysis in an IS/MND or 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 this IS/MND were 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 environmental impact reports 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 in this IS/MND, the Project objectives are identified below:

1) Increase the reliability of the Stirling City wastewater conveyance system by replacing existing clay wastewater supply pipeline as needed with new PVC pipe, installing pipe lateral connections, and replacing manholes.

2) Improve the wastewater collection and conveyance throughout the complete service area of Stirling City in a cost-effective manner with minimal disruption of service.

3) Meet current wastewater system engineering and maintenance standards throughout the entirety of the Stirling City wastewater system.

4) Obtain Federal funding for the Project through the State Water Resources Control Board's (SWRCB's) Clean Water State Revolving Fund, Small Community Wastewater Program (SCWP) Program.

6.2 Alternatives Descriptions and Analysis

6.2.1 Alternatives Considered but Rejected as Infeasible

Alternate Site Alternative

An alternative with new wastewater collection infrastructure on an alternate site was considered but rejected for a number of reasons: An alternative location would increase the potential for environmental impacts because the pipeline would then be placed in a new location (and likely a larger area) rather than where pipeline already exists, and a new location would greatly increase the cost of implementation as new additional connection to the existing infrastructure would be necessary.

Reduced Project Alternative

An alternative with the elimination of several Project subsections was considered but rejected for a number of reasons. This alternative would eliminate pipeline installation in sections of the alignment determined to be in the least state of disrepair. This alternative would serve to consolidate the Project to a smaller area and thus generally reduce potentially significant and less than significant environmental impacts discussed throughout the IS/MND. However, this alternative was rejected for the following reasons: The alternative would not meet the Project objective of improving the community's ability to collect wastewater, old pipeline left in place would be at a high risk of failure in the future, and decommissioning of portions of failing pipeline as needed would eliminate wastewater services to portions of the community.

6.2.2 Description of Alternatives

Alternative 1: No Project

CEQA Guidelines Section 15126.6(e)(1) states that a No Project Alternative must be analyzed. Alternative 1 evaluates the environmental impacts if the Project site were to remain in its current state as an existing deteriorating wastewater pipeline. No construction would occur with this alternative and the existing pipeline will most likely fail at a point in the future.

6.2.3 Analysis of Alternatives

The Project alternatives are evaluated in less detail than those of the Proposed Project, and the impacts are described in terms of difference in outcome compared with implementing the Proposed Project. Table 6.0-1 at the end of this section provides an at-a-glance comparison of the environmental benefits and impacts of each alternative. Table 6.0-2 compares the alternatives to the basic project objectives.

Alternative 1: No Project

Under the No Project alternative, future development of the Project would not occur, and the wastewater infrastructure of the Project site would remain as it currently exists.

Aesthetics and Scenic Resources

The Project would not result in any significant impacts on aesthetics and scenic resources.

Alternative 1 would not result in the development of any new wastewater infrastructure in Stirling City. 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 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, whereas the Proposed Project may include small aesthetic changes primarily during construction. Therefore, Alternative 1 is considered superior to the Project with regard to impacts to aesthetics and scenic resources.

Agriculture and Forestry Resources

As discussed in Section 4.2, the Project would not result in impacts on agricultural or forestry resources as the Project site as Urban and Built-Up Land (DOC 2019a). No agricultural production has occurred on the land in the past nor at present. The Project area is urbanized and is completely developed for residential use. Thus, there is no potential for the land within the Project area to be utilized for agricultural use. Thus, the Project would not remove the ability to use the area as farmland if so desired in the future, as once construction is complete, the area will return to its pre-construction condition.

No construction would occur under Alternative 1 and any issues related to agricultural and forestry resources would remain as they currently exist and would not expand. However, because the Project as proposed has no impact to agricultural or forestry resources, Alternative 1 will cause no change in impact from the Project as proposed and therefore be the same as the Project.

Air Quality

As discussed in Section 4.3, the Project-generated air emissions would not exceed applicable air quality thresholds, not result in TAC impacts, and not conflict with regional air quality management planning. The Project would have a less than significant air quality impact during construction and would have no impact to air quality during operation.

Alternative 1 would not exceed any air quality thresholds as the site would remain in its existing condition and no construction would occur. No air quality contaminants would be generated 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

The Project would result in a potential impact to several protected nesting bird species during construction. However, as defined in the IS/MND mitigation measures **BIO-1** and **BIO-2** would reduce the potential impact to nesting bird species to a less than significant level. With Alternative 1, no new construction or other uses are proposed. Thus, this alternative would not result in impacts to biological resources beyond those currently existing. Alternative 1 is considered superior to the Project regarding

impacts on biological resources as the impacts on biological resources would be greater with the Project as proposed than with Alternative 1.

Cultural Resources

As discussed in Section 4.5, the Proposed Project may result in potential impacts to unknown/undiscovered historical, and archaeological cultural resources. However, 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 any potential impacts to cultural resources. As such, the impacts on cultural resources under this alternative are less than the Project and Alternative 1 is considered superior to the Project with regard to impacts on cultural resources.

Energy

The Proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The construction phase of the Project would require the use of gasoline and energy to power construction vehicles and equipment. However, based on the minimal increase in gasoline and electricity use the Project would result in for the county, the Project would not be considered wasteful, inefficient, or unnecessary regarding consumption of energy for a proposed land use project.

Alternative 1 would require no usage of gasoline or electricity as no Project would occur. Thus, Alternative 1 is considered environmentally superior to the Proposed Project with regard to impacts on energy use.

Geology and Soils

The Proposed Project may result in potential impacts to unknown paleontological resources. However, as defined in the Section 4.7, mitigation measure **GEO-1** would reduce this potential impact to a less than significant level. As no new infrastructure or other uses are proposed with Alternative 1, this alternative would not result in the potential for geological, soil, or paleontological impacts. As such, the potential impacts to paleontological resources under this alternative are less than the Project and Alternative 1 is considered superior to the Project with regard to impacts to geology, soils and paleontological resources.

Greenhouse Gases and Climate Change

The Project's GHG emissions were determined to be less than significant. No GHG thresholds have been established for the BCAQMD, so the Project emissions were compared to the California Air Pollution Control Officers Association (CAPCOA) significance thresholds. The Proposed Project would not produce a significant amount of GHG emissions during construction and no emissions during operation, and thus would have a less than significant impact in regard to GHG and climate change.

Alternative 1 would require no Project construction 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, it was determined that the Project would have a less than significant impact with regard to hazardous materials.

Alternative 1 involves no construction. Alternative 1 would have no potential for release of hazardous materials as construction would not occur. The Project as proposed would involve construction which could potentially expose people or the environment to hazard materials such as an accidental hazardous material release. While, this potential is not considered significant, the potential for release of hazardous materials would be non-existent with Alternative 1 as no construction would occur. As such, Alternative 1 is considered superior to the Project with regard to impacts on hazardous materials.

Hydrology and Water Quality

The Project would have a less than significant impact to hydrology and water quality.

Alternative 1 would not result in any construction. Alternative 1 would be the continuation of a use that currently exists and would have no impact on hydrology and water quality beyond those already existing. However, continued use of the existing pipeline may result in failure of the pipeline in the future. This failure may in turn lead to water quality issues due to the potential for wastewater flows onto the existing streets. As such, Alternative 1 is considered inferior to the Project with regard to impacts to hydrology and water quality.

Land Use and Planning

As with the Project, 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 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 County land use policies or regulations. Alternative 1 and the Proposed Project would have a roughly equivalent impact to land use and planning.

Mineral Resources

The analysis presented in Section 4.12 determined that there were no impacts to mineral resources from development of the Project. Alternative 1 would similarly have no impact.

Noise

The Proposed Project will create noise during construction of the new facilities. However, the noise would be produced only during the construction phase and the Project would produce no noise during the operational phase. Thus, the Proposed Project would have a less than significant impact on noise.

Section 3.4 identifies current noise levels at the Project site. Alternative 1 would not result in increased noise levels. 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 Project would not result in an increase in permanent population or new housing to the area. The Project will have no impact in this area.

No additional development of the site would occur under Alternative 1. As such, Alternative 1 would not result in population growth. Neither the Project nor Alternative 1 would remove housing or displace persons. As such, Alternative 1 would result in the same level of impact to population and housing as the 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 Project would result in less than significant impacts to fire services, police services, schools, and parks.

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 a similar impact to the Proposed Project regarding public services.

Recreation

The analysis presented in Section 4.16 determined that the Project would have no impact on local recreation facilities. The construction and operation of the Project would not cause deterioration or the need for expanded or new facilities.

Alternative 1 would have no increase in population in the community. 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 on recreation. Alternative 1 would result in the same level of impact when compared to the Project regarding recreation.

Transportation

As discussed in Section 4.17, the Project would have a less than significant impact to transportation and result in only a short-term minimal increase in VMT during construction. The Project may temporarily disrupt the use of the unpaved alley or street by vehicles, public transit, bikes, and pedestrians in which the new wastewater pipeline will be constructed . Because the interruption in use is temporary and alternative routes will be provided, the impact is less than significant.

Alternative 1 would result in no increases in on Skyway or connector routes. Alternative 1 would not disrupt circulation as no construction would occur. As such, Alternative 1 would have a slightly reduced impact and be the superior alternative when compared to the Proposed Project regarding transportation.

Tribal Resources

As discussed in Section 4.18, the Project would result in potential impacts to unknown/undiscovered tribal cultural resources. However, as defined in the IS/MND, mitigation measure **CUL-1** would reduce this potential impact to a less than significant level. As no new construction is proposed with Alternative 1, this

alternative would not result in potential impacts tribal cultural resources. As such, the potential impacts to tribal cultural resources under this alternative are less than those of the Project, and Alternative 1 is considered superior to the Project with regard to impacts to these resources.

Utilities and Service Systems

The Proposed Project would result in no impact to water, wastewater, and stormwater drainage and would have a less than significant impact to solid waste facility capacity. Alternative 1 would result in no change from existing conditions. The demand for utilities and services would be the same as it exists currently. However, Alternative 1 would have the potential to result in impacts to the community's wastewater collection system as the pipeline would continue to deteriorate and eventually result in the community's inability to provide wastewater service in this area. As such, Alternative 1 would result in a greater impact when compared to the Project. The Project as proposed is considered superior to Alternative 1 regarding utilities and service systems.

Wildfire

The California Department of Forestry and Fire protection (CAL FIRE) has designated the Project site as being within an area having a very high wildland fire potential in a state responsibility area (SRA) (CAL FIRE 2007). However, due to the location of construction and the fact that the wastewater pipeline will operate underground, the Project will have a less than significant impact regarding wildfire safety. Alternative 1 would result in no construction in the Project area. Due to the reduced potential for Alternative 1 to cause disruption of wildfire response or evacuation efforts, Alternative 1 is considered superior to the Project with regard to wildfires.

6.3 Environmentally Superior Alternative

Table 6.0-1 summarizes the potential impacts of the alternative evaluated in this section, as compared with the potential impacts of the Proposed Project. Table 6.0-2 identifies how well the alternative meets the Project objectives. Based on the evaluation contained in subsection 6.2, Alternative 1- the No Project Alternative would have fewer adverse environmental impacts than the Proposed Project. Alternative 1 would effectively reduce Project impacts in eleven impact categories and increase impacts in one category. Comparatively, Alternative 1 was determined to have the least adverse impacts on the physical environment because Alternative 1 would cause no impact in most categories. However, 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)].

The Proposed Project has four objectives. Table 6.0-2 illustrates a comparison of the objectives achieved by the No Project Alternative as compared to those achieved by the Proposed Project. The environmentally superior alternative must meet all or most of the Project objectives. However, as shown in the table, the No Project Alternative would not meet any of the four Project objectives.

Furthermore, the Proposed Project's potential impacts to the physical environment could be mitigated to a less than significant level. While Alternative 1 would have less or equal impact to the environment for the majority issue areas when compared to the Proposed Project, the impact to utilities would be greater.

In summary, Alternative 1- the No Project Alternative does not meet any of the Project objectives and would have a significant impact on utilities. With mitigation, all of the potentially significant impacts of the Proposed Project will be mitigated to a less than significant level. As such, the Proposed Project is identified as the environmentally superior alternative pursuant to CEQA Guidelines section 15126.6(e)(2).

Table 6.0-1. Alternatives Impacts Comparison

Environmental Issue	Proposed Project Impact Finding (Mitigated)	Alternatives
		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	-
Geology and Soils	Less Than Significant	-
Greenhouse Gases and Climate Change	Less Than Significant	-
Hazards and Hazardous Materials	Less Than Significant	-
Hydrology and Water Quality	Less Than Significant	+
Land Use	Less Than Significant	=
Mineral Resources	Less Than Significant	=
Noise	Less Than Significant	-
Population and Housing	Less Than Significant	=
Public Services	Less Than Significant	=
Recreation	Less Than Significant	=
Transportation	Less Than Significant	-
Tribal Cultural Resources	Less Than Significant	-
Utilities	Less Than Significant	+
Wildfire	Less Than Significant	=
Overall Determination		-

- Impacts less than those of the proposed project
+Impacts greater than those of the proposed project
= Impacts similar to those of the proposed project, or no better or worse

Table 6.0-2. Comparison of Alternatives by Project Objectives

Project Objectives	Alternatives
	1
Increase the reliability of the Stirling City wastewater conveyance system by replacing existing clay wastewater supply pipeline as needed with new PVC pipe, installing pipe lateral connections, and replacing manholes.	-
Improve the wastewater collection and conveyance throughout the complete service area of Stirling City in a cost-effective manner with minimal disruption of service.	-
Meet current wastewater system engineering and maintenance standards throughout the entirety of the Stirling City wastewater system.	-
Obtain Federal funding for the Project through the State Water Resources Control Board's (SWRCB's) Clean Water State Revolving Fund, Small Community Wastewater Program.	-

= Meets project objective
- Does not meet project objective

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8.0 BIBLIOGRAPHY

[BCAG] Butte County Association of Governments. 2018. 2017/18 – Traffic Counts. http://www.bcag.org/Planning/Socio-Economic-Data/Traffic-Counts/index.html.

Butte County. 2003. Butte County Storm Water Management Program. https://www.waterboards.ca.gov/water_issues/programs/stormwater/swmp/butte_co_swmp.pdf.

_____. 2004. Butte County Groundwater Management Plan. https://www.buttecounty.net/waterresourceconservation/groundwatermanagementplan.

_____. 2007. Butte County Multi-Jurisdictional All Hazard Pre-Disaster Mitigation Plan. http://www.buttecounty.net/Portals/19/ButteMHMPMarch2007Resolutions1-8-10.pdf.

_____. 2010. General Plan Draft EIR. http://www.buttecounty.net/dds/Planning/Butte-County-General-Plan

_____. 2012. General Plan Land Use Designations. https://www.buttecounty.net/Portals/10/Docs/GP2030/Chapters/AMENDED_GPLU_110612_Esize.pdf.

_____. 2016. Butte County Water Inventory and Analysis. https://www.buttecounty.net/wrcdocs/Reports/I%26A/Report/AppxA.pdf.

_____. 2017. Butte County Airport Land Use Commission. Butt County Airport Land Use Compatibility Plan. https://www.buttecounty.net/Portals/10/Docs/ALUC/BCALUCP%20Draft%20Update/Admin_Draft_ALUCP_Chapters_1-4.pdf.

_____. 2018. Butte County 2030 General Plan. https://www.buttecounty.net/dds/Planning/General-Plan/Chapters.

_____. 2019a. Station 13, Stirling City. https://www.buttecounty.net/fire/FireFacilities/FireStations/Station13.

_____. 2019b. Butte Regional Conservation Plan. http://www.buttehcp.com/documents/Documents/AFinal%20BRCP%20June%202019/02_BRCP_Chapter_1_Introduction_Final_Clean.pdf.

[BCAQMD] Butte County Air Quality Management District. 2019. http://bcaqmd.org/.

[B-Line] Butte Regional Transit. 2019. http://www.blinetransit.com/Schedules/Route-41-paradise-Pines---Chico/index.html.

[BLM] Bureau of Land Management. 2019. Bureau of Land Management, General Land Office Records. Electronic document, http://www.glorecords.blm.gov/. Accessed November 2019.

[CAL FIRE] California Department of Forestry and Fire Protection. 2007. Fire Hazard Severity Zones in SRA. Adopted November 7, 2007. https://osfm.fire.ca.gov/media/6652/fhszs_map4.pdf.

_____. 2019. Statewide Incidents Map. https://www.google.com/maps/d/viewer?ll=36.51846598967593%2C-114.862060546875&hl=en&z=6&source=embed&ie=UTF8&mid=1HacmM5E2ueL-FT2c6QMVzoAmE5M19GAf&output=embed.

[CalRecycle]. 2019a. Multi-year Countywide Origin Summary. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Origin/CountywideSummary.

_____. 2019b. SWIS Facility/Site Search. https://www2.calrecycle.ca.gov/SWFacilities/Directory/.

_____. 2019c. Countywide, Regionwide, and Statewide Jurisdiction Diversion / Disposal Progress Report. https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/DiversionDisposal.

[Caltrans] California Department of Transportation. 2013. *Transportation and Construction Vibration Guidance Manual*.

_____. 2016. Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual. https://dot.ca.gov/-/media/dot-media/programs/construction/documents/environmental-compliance/october2016-swppp-manual-a11y.pdf.

_____. 2019. California Scenic Highway Mapping System. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

[CAPCOA] California Air Pollution Control Officers Association. 2013. Health Effects. http://www.capcoa.org/health-effects/.

[CARB] California Air Resources Board. 2005. *Air Quality and Land Use Handbook*

[CCR] California Code of Regulations. 2019. https://govt.westlaw.com/calregs/Index?transitionType=Default&contextData=%28sc.Default%29

[CGS] California Department of Conservation, California Geological Survey. 2002. California Geomorphic Provinces. https://www.conservation.ca.gov/cgs/Documents/Note_36.pdf.

_____. 2010. Regional Geologic Hazards and Mapping Program - Table 4 Cities and Counties Affected by Alquist-Priolo Earthquake Fault Zones as of January 2010. http://www.conservation.ca.gov/cgs/rghm/ap/Pages/affected.aspx.

_____. 2015. CGS Information Warehouse: Regulatory Maps. http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps.

_____. 2016a. Earthquake Shaking Potential for California [map]. ftp://ftp.conservation.ca.gov/pub/dmg/pubs/ms/048/MS_048_revised_2016.pdf.

_____. 2016b. Geologic Map of the California. https://cadoc.maps.arcgis.com/home/item.html?id=9eba56d981df4f839769ce9a2adc01f4.

Climate Registry. 2016. General Reporting Protocol. https://www.theclimateregistry.org/tools-resources/reporting-protocols/general-reporting-protocol/.

[DMR] Division of Mine Reclamation, California Department of Conservation. 2019. Mines Online. http://maps.conservation.ca.gov/mol/index.html.

[DOC] California Department of Conservation, Division of Land Resource Protection. 2016. Butte County Williamson Act FY 2015/2016. ftp://ftp.consrv.ca.gov/pub/dlrp/wa. Accessed October 9, 2019.

_____. 2019a. Important Farmland Finder. Available at: http://maps.conservation.ca.gov/ciff/ciff.html. Accessed October 9, 2019.

_____. 2019b. Data Viewer. https://maps.conservation.ca.gov/geologichazards/#dataviewer.

[DOF] California Department of Finance. 2019. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2019 with 2011 Census Benchmark. http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/.

[DTSC] California Department of Toxic Substances Control. 2019. Hazardous Waste and Substance Site List http://www.envirostor.dtsc.ca.gov/public/. Accessed January 23, 2020.

[DWR] California Department of Water Resources. 2003. Bulletin 118-Update 2003. https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118.

_____. 2018a. Atlas. http://atlas-dwr.opendata.arcgis.com/datasets/dd29dcc8ceef4e30b95dc991505b618f_0?geometry=-121.610%2C39.895%2C-121.446%2C39.918.

_____. 2018b. Water Data Library. http://wdl.water.ca.gov/waterdatalibrary/. Accessed October 8, 2019.

_____. 2020. California Dam Breach Inundation Map. https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2. Accessed February 18, 2020.

Del Oro Water Company. 2016. A Brief History of Del Oro Water Company. http://www.delorowater.com/deloro/about-us.html.

[ECDMS] California Energy Consumption Data Management System. 2019. Website: Electricity and Natural Gas Consumption by County. http://ecdms.energy.ca.gov/elecbycounty.aspx.

Engineering Toolbox. No date. Illuminance – Recommend Light Levels. http://www.engineeringtoolbox.com/light-level-rooms-d_708.html.

[ECORP] ECORP Consulting, Inc. 2020a. Stirling City Sewer Rehabilitation Project Emissions Memorandum. February 2020.

_____. 2020b. Biological Resources Assessment Report for the Stirling City Sewer Rehabilitation Project. January 2020.

_____. 2020c. Cultural Resources Inventory and Evaluation Report for the Stirling City Sewer Rehabilitation Project. January 2020.

_____. 2020d. Stirling City Sewer Rehabilitation Project Noise Impact Memorandum. February 2020.

[FEMA] Federal Emergency Management Agency, 2011. FIRM Flood Insurance Rate Map. Map No. 06007C0250E. Effective Date June January 06, 2011.

[FTA] Federal Transit Administration. 2018. *Transit Noise and Vibration Impact Assessment*.

[FHWA] Federal Highway Administration. 2008. *Roadway Construction Noise Model*.

_____. 2011. Effective Noise Control During Nighttime Construction. http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm.

[NCRS] Natural Resources Conservation Service. 2019. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/.

[NWSRS] National Wild and Scenic Rivers System. No date. Accessed January 28, 2020. https://www.rivers.gov/california.php.

[SVAQEEP] Sacramento Valley Air Quality Engineering and Enforcement Professionals. 2015. *Northern Sacramento Valley Planning Area: 2015, Triennial Air Quality Attainment Plan*.

[SRWP] Sacramento River Watershed Program. 2010. Upper Feather River Watershed. http://www.sacriver.org/aboutwatershed/roadmap/watersheds/feather/upper-feather-river-watershed.

[SWRCB] State Water Resources Control Board. 2019. Geotracker. Accessed January 23, 2020. http://geotracker.waterboards.ca.gov.

[PG&E] Pacific Gas and Electric Company. https://www.pge.com/en_US/safety/electrical-safety/safety-initiatives/desabla/desabla-centerville-hydroelectric-facility.page. Accessed January 24, 2020.

Policy for Implementing the Clean Water State Revolving Fund. 2018. https://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/docs/final_policy_1118.pdf

[UCMP] University of California Museum of Paleontology. 2019. UCMP Locality Search – Butte County. https://ucmpdb.berkeley.edu/loc.html.

[US Census] U.S. Census Bureau. 2010. 2010 Census. https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

_____. 2017. American Fact Finder. https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml.

[USEPA] United States Environmental Protection Agency. 2007. Developing your Stormwater Pollution Prevention Plan. https://www3.epa.gov/npdes/pubs/sw_swppp_guide.pdf.

[USGS] U.S. Geological Survey. 2018. Areas of Land Subsidence in California. https://ca.water.usgs.gov/land_subsidence/california-subsidence-areas.html.

United States Zip Codes Codes.org. 2020. Search by ZIP, address, city, or county: https://www.unitedstateszipcodes.org/95978/

[WEAL] Western Electro-Acoustic Laboratory, Inc. 2000. *Sound Transmission Sound Test* Laboratory *Report No. TL 96-186*.

Weatherspark. 2019. Average Weather in Paradise, California, United States. https://weatherspark.com/y/1192/Average-Weather-in-Paradise-California-United-States-Year-Round.



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