Draft Initial Study and Proposed Mitigated Negative Declaration
Chico Airport Pond Sewer Repair Project
(Capital Project No. 50358)

Chico, California

Lead Agency:

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January 2026

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
AB	Assembly Bill
Airport	Chico Regional Airport
APN	Assessor's Parcel Number
ARD	Aquatic Resources Delineation
BCAQMD	Butte County Air Quality Management District
BCC	Bird of Conservation Concern
BIOS	Biogeographic Information and Observation System
BMPs	Best Management Practices
BRA	Biological Resources Assessment
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAP	City of Chico Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commissions
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey

Term	Description
CH_4	Methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
City	City of Chico
CNEL	Community Noise Equivalent Level
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 Resources
CRPR	California Rare Plant Ranks
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DHS	Department of Health Services
DPS	Distinct Population Segments
DOC	California Department of Conservation
DPM	diesel particulate matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
ESA	Endangered Species Act
FHSV	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas
HCP	Habitat Conservation Plan
HDPE	high-density polyethylene
HUC	Hydrologic Unit Code
IS/MND	Initial Study/Mitigated Negative Declaration

Term	Description
kWh	kilowatt-hours
L_{max}	Maximum Level
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCV	Manual of California Vegetation Online
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MSL	Mean Sea Level
mya	million years ago
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NCIC	North Central Information Center
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
N_2O	Nitrous Oxide
NO_x	Nitrogen Oxides
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSVAB	North Sacramento Valley Air Basin
O_3	Ozone
OHP	Office of Historic Preservation
OHWM	Ordinary High Water Mark
PG&E	Pacific Gas & Electricity
PM	Particulate Matter
$PM_{2.5}$	Particulate matter with a diameter of 2.5 microns or less

Term	Description
PM_{10}	Particulate matter with a diameter of 10 microns or less
PPE	Personal Protective Equipment
PPV	peak particle velocity
PRC	Public Resources Code
Proposed Project/Project	Chico Airport Pond Sewer Repair Project
PVC	polyvinyl chloride
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
ROW	right-of-way
SB	Senate Bill
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act of 1975
SO_2	Sulfur Dioxide
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCRs	Tribal Cultural Resources
UAIC	United Auburn Indian Community
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle Miles Travelled
WPCP	Wastewater Pollution Control Plant

1.0 BACKGROUND

1.1 Summary

Project Title:	Chico Airport Pond Sewer Repair Project
Lead Agency Name and Address:	City of Chico 411 Main Street Chico, CA 95928
Contact Person and Phone Number:	Tracy Bettencourt, Senior Planner City of Chico Public Works, Engineering 411 Main Street P.O. Box 3420 Chico, California 95927 (530) 879-6903
Project Location:	The Proposed Project is located on APNs 047-550-001 and 047-550-006, at the south end of the Chico Regional Airport, formerly known as the Municipal Airport. The ±11.85-acre Project Area is located within the vicinity of the City's former wastewater treatment plant and pond and the City's existing composting facility, located off Cohasset Road in Chico, California.
Zoning District:	Airport Public Facilities (AP)
General Plan Designation:	Public Facilities & Services (PFS)

1.2 Introduction

The City of Chico is the California Environmental Quality Act (CEQA) Lead Agency for this Initial Study. This Initial Study has been prepared to identify and assess the anticipated environmental impacts of the Chico Airport Pond Sewer Repair Project (Proposed Project) to satisfy CEQA (Public Resources Code [PRC], Section 21000 et seq.) and state CEQA Guidelines (Title 14, California Code of Regulations [CCR] 15000 et seq.).

The Proposed Project involves construction of a new stormwater diversion drain line and sanitary sewer infrastructure to improve efficiency and reduce overflow occurrences that have resulted in the comingling of wastewater and stormwater at the City's former wastewater treatment pond. The Project also proposes to construct a new road to access the upgraded sewer infrastructure.

To facilitate public outreach and coordination for CEQA purposes, the Project elements are analyzed together as a single project in this Initial Study. It is noted that the proposed storm drain outfall would be located above the ordinary high water mark (OHWM) of the unnamed drainage channel that empties to the receiving waterway, Sheep Hollow Creek, located west of the proposed infrastructure. The proposed storm water diversion infrastructure would not change or otherwise modify the diversion of stormwater to Sheep Hollow Creek.

CEQA requires that all state and local government agencies consider the environmental consequences before approving discretionary projects. The City of Chico will use this CEQA Initial Study to determine which CEQA document is appropriate for the Project: either a Negative Declaration, Mitigated Negative Declaration (MND), or Environmental Impact Report (EIR).

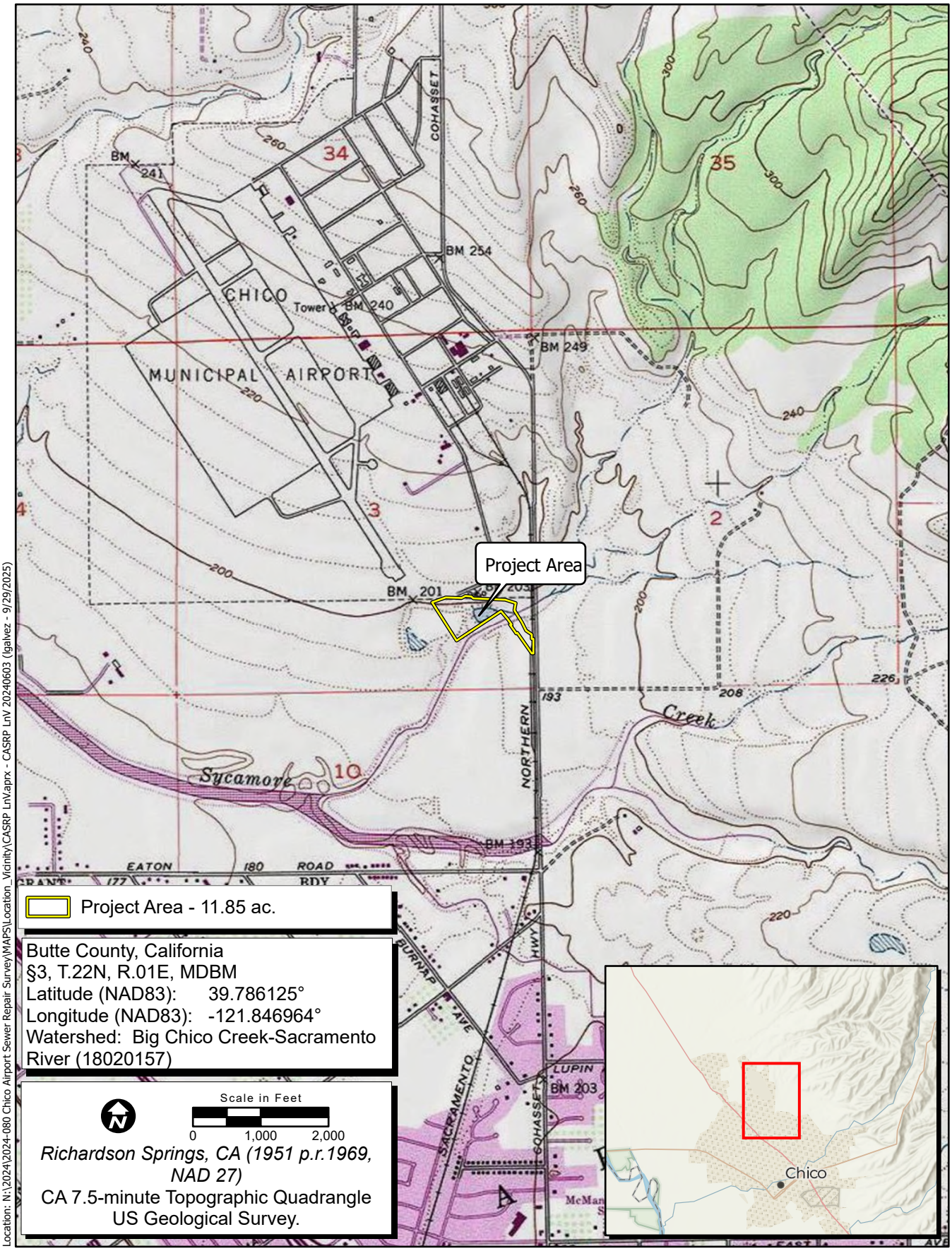
In accordance with CEQA, this Initial Study/Mitigated Negative Declaration (IS/MND) will be circulated for a 30-day public review and comment period. Written comments should be addressed to:

Tracy Bettencourt, Senior Planner
City of Chico
P.O Box 3420
Chico, California 95927
Tracy.bettencourt@chicoca.gov

1.3 Surrounding Land Uses/Environmental Setting

As shown in Figure 1-1, Project Location and Vicinity, the Project Area is within Chico city limits in Butte County, California. The Project is located west of Cohasset Road, south of the Chico Regional Airport, and north of East Eaton Road. The Project Area corresponds to a portion of Section 3, Township 22 North, Range 1 East (Mount Diablo Base and Meridian) of the *Richardson Springs, California* 7.5-minute quadrangle.

The ±11.85-acre Project Area is located on Assessor's Parcel Numbers (APNs) 047-550-001 and 047-550-006, south of the Chico Regional Airport and extends south across a Federal levee, which runs parallel to Sheep Hollow Creek. The Project Area is within the vicinity of the City's former wastewater treatment plant and retired wastewater treatment pond. The City's existing and active Composting Facility is located north of the Project Area. The approximate center of the Project Area is located at latitude 39.78613° and longitude -121.846987° within the Big Chico Creek-Sacramento River Watershed (Hydrological Unit Code 18020157, USGS 2025).



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Map Date: 9/29/2025
Sources: ESRI, USGS

Figure 1-1. Project Location and Vicinity

2.0 PROJECT DESCRIPTION

2.1 Project Background

The City of Chico provides sewer and stormwater service within the City limits. The City's wastewater collection system consists of sewer mains, trunk sewers, lift stations, and flow diversions that collect and convey wastewater to the City's Wastewater Pollution Control Plant (WPCP), which is located west of the City on Chico River Road. Storm drainage management within the City is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The Proposed Project includes upgrades to existing sewer and stormwater infrastructure located south of the Chico Regional Airport and the City's former wastewater treatment plant.

During rain events, stormwater flows southward from the impervious surfaces associated with the Chico Regional Airport and pools directly northwest of the former wastewater treatment plant's retired wastewater pond, occasionally overflowing into the pond via an existing stormwater inlet and storm drain line. A second storm drain line connects the retired wastewater pond to an unnamed drainage channel to the west. However, it is no longer in use. Figure 2-1, Site Plan, depicts the existing stormwater pipes within the western portion of the Project Area.

Within the eastern portion of the Project Area, an existing 12-inch polyvinyl chloride (PVC) sewer pipe (sewer main) follows a general north-south alignment, carrying wastewater from the Chico Regional Airport southward. At the point where Sheep Hollow Creek intersects the sewer main, an existing inverted siphon system maintains the flow of the existing sanitary sewer system. At this location, the siphon system diverts wastewater from the 12-inch sewer main north of Sheep Hollow Creek through an 8-inch sewer pipe under Sheep Hollow Creek and reconnects to the 12-inch sewer main on the southern side of Sheep Hollow Creek. Figure 2-1, Site Plan, depicts the existing sewer main within the eastern portion of the Project Area. Due to the smaller 8-inch pipe diameter, sewage clogs occur periodically at this location. As a result, wastewater has been recorded to back-up and overflow into the nearby retired wastewater pond at an existing junction box directly east of the pond, resulting in the comingling of both wastewater and stormwater. The City periodically pumps the comingled wastewater and stormwater from the pond. Clogs are serviced via an existing sewer manhole directly north of the Federal levee along the sewer main alignment. However, due to the lower elevation below the levee, this manhole is often inaccessible during high rain events, as the area is pooled with water.

To reduce the stormwater and sanitary sewer system issues within the Project Area, the Project proposes the installation of a new storm drain line, construction of a new and more accessible manhole south of the Federal levee, and replacement of associated sanitary sewer infrastructure. Additionally, the Proposed Project includes construction of an access road off Cohasset Road, south of the Federal Levee, to provide access to the proposed manhole.

2.2 Proposed Project

2.2.1 Storm Drain Construction

To reduce stormwater from entering the retired wastewater pond, the Proposed Project would abandon approximately 605 linear feet of existing storm drain line segments and install a new storm drain line. The abandoned lines would be capped at the ends with concrete. The proposed storm drain line would collect water from the existing drainage inlet north of the wastewater pond and outfall stormwater directly into the existing unnamed drainage channel, completely bypassing the wastewater pond. The new storm drain line would be a 12-inch high-density polyethylene (HDPE) pipe, approximately 345 feet in length. The outfall elevation of the proposed storm drain line would be located above the OHWM.

To install the proposed storm drain line, the vegetation along the proposed alignment would be cleared and disposed of offsite. No trees would be removed. Following clear and grub, a trench measuring approximately 3.5 feet wide and up to 8 feet deep would be dug. The storm drain line would be placed and backfilled, and soils compacted. Following successful pressure testing, the ground surface would be restored to pre-Project grades.

A temporary construction staging area would be established in the open space between the drainage channel and the retired wastewater pond (see Figure 2-1). Refueling, lubrication, or maintenance of construction vehicles would only be permitted within the construction staging area. Access to the Project Area for storm drain installation would be from the City of Chico Compost Facility's existing driveway at 4441 Cohasset Road. Temporary signage would be placed where construction vehicles would enter and leave the public right-of-way (ROW) to notify the public of the approaching work zone and the potential for construction vehicles.

2.2.2 Sewer Junction Box Upgrades

The Project proposes to replace an existing plug valve with a 12-inch gate valve and install a level sensor in the existing junction box, along the existing alignment of the 12-inch sanitary sewer pipe main, located north of Sheep Hollow Creek and directly east of the wastewater treatment pond. Installation of the proposed sewer junction box infrastructure would be limited to accessing the existing buried junction box and would not include significant ground-disturbing excavation. The installation of infrastructure at this location would support the efficiency of the sanitary sewer system by monitoring and controlling the flow of wastewater to avoid overflow and spills.

2.2.3 Sewer Pipe Manhole and Access Road

The Project proposes a new sewer manhole to be installed within the alignment of the existing 12-inch sewer main. The proposed location of the manhole would be approximately 150-200 feet south of the existing Federal levee, on the south side of Sheep Hollow Creek, and would avoid encroachment of the levee easement limits. The manhole would be installed to allow for maintenance access to the existing sewer siphon system.

Installation of the proposed manhole would include clear and grub at the proposed location, south of the Federal levee. Following clear and grub, excavation to reach the required depth of the 12-inch sewer pipeline could reach up to 8 feet and would allow for proper placement of the new concrete manhole.

To access the proposed manhole, an approximately 342-foot access road is proposed to be constructed over the alignment of the existing 12-inch sewer main directly south of the existing Federal levee access road, off of Cohasset Road. The access road would be graded and surfaced with crushed rock along the length of the route. A turnaround would be constructed at the end of the access road, ensuring a buffer from the Federal levee easement limits. A 12-inch culvert would be dug under the access road at the entrance along Cohasset Road. Entrance to the access road would be restricted via a swing gate.

A construction staging area for the installation of the proposed sewer pipe manhole and access road would be established just west of the existing Federal levee entrance driveway off Cohasset Road. Refueling, lubrication, or maintenance of construction vehicles would only be permitted within the construction staging area. Temporary signage would be placed where construction vehicles would enter and leave the public ROW to notify the public of the approaching work zone and the potential for construction vehicles. Should Project construction require activity within a public ROW or easement, an encroachment permit would be obtained.

Construction for all project elements is anticipated to take place in summer of 2026 or 2027 and last up to three months. No night or weekend work is expected.

2.3 Regulatory Requirements, Permits, and Approvals

The following permits and approvals are anticipated for the Proposed Project:

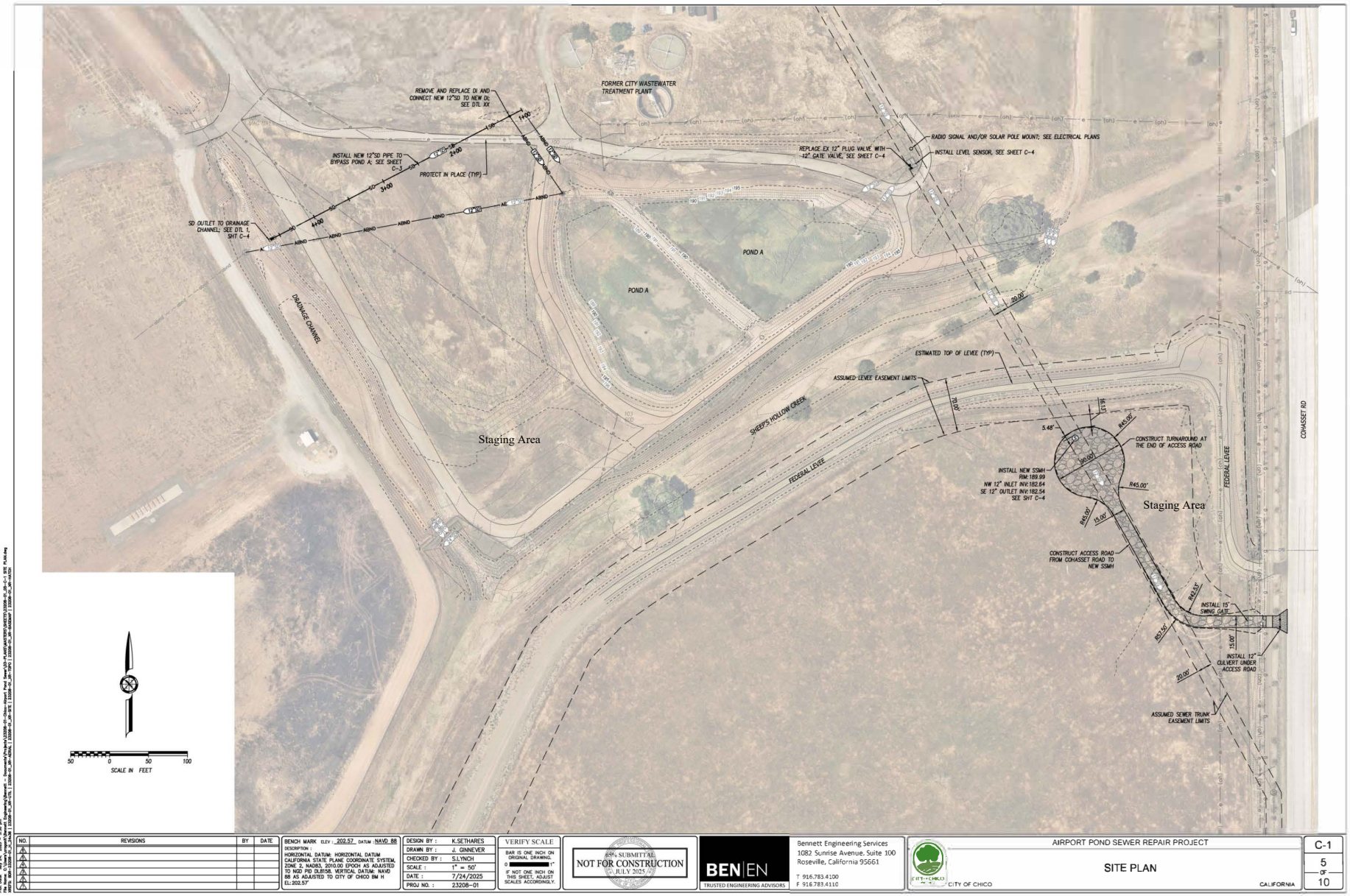
- CEQA Document Adoption and Project Approval – City of Chico
- Section 1602 Streambed Alteration Agreement – California Department of Fish and Wildlife
- Permanent and Temporary Construction Easements (as required)

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 California Native American tribes that are traditionally and culturally affiliated with the geographic area of the 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.

Further information on potential Tribal Cultural Resources in the Project Area is provided in Section 4.18 *Tribal Cultural Resources* of this IS/MND.



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Map Date: 07/29/2025

Photo (or Base) Source: Bennett Engineering Services

Figure 2-1. Site Plan

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

The environmental factors checked below could be potentially affected by this project, but, due to the inclusion of specific mitigation measures, will result in impacts that are a "Less Than Significant with Mitigation Incorporated," as indicated by the environmental 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

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.	☐

Tracy R. Bettencourt – MPA, AICP, Senior Planner
(for Brendan Vieg, Community Development Director)

Date

4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental and Regulatory Setting

4.1.1.1 Visual Character of the Project Area

The Project Area is composed of relatively flat terrain at approximately 200 feet elevation above mean sea level (AMSL). The Project Area is bisected by Sheep Hollow Creek that flows east to west through the eastern portion of the Project Area. The Project Area is westerly bordered by an unnamed drainage channel that flows north to south, connecting to Sheep Hollow Creek. Parallel to Sheep Hollow Creek is a ±1.9-mile Federal levee, identified as the Chico Creek-Mud Creek – Unit 3 East, Sycamore RT levee system (USACE 2025).

The ±11.85-acre Project Area is located west of Cohasset Road and directly south of the Chico Regional Airport and the area formerly used as the City's wastewater treatment plant. Remains of infrastructure from the former wastewater treatment plant can be seen in the northern vicinity of the Project Area. The former wastewater plant's retired wastewater ponds are located within the Project Area. The City of Chico Compost Facility is located north of the Project Area where an entrance driveway off Cohasset Road leads to the compost collection and receiving areas. The Project Area can be seen from Cohasset Road and the Chico Airport bike path, which runs parallel to Cohasset Road.

The California Scenic Highway Program, administered by Caltrans, intends to protect and enhance the scenic beauty of California's highways and adjacent corridors. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been designated. 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 (Caltrans 2018a). The nearest eligible State Scenic Highway is State Highway 70, approximately 18.4 miles southeast of the Project Area, which does not provide views of the Project Area.

4.1.2 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?	☐	☐	☐	☒

No Impact.

Based on a review of the Caltrans State Scenic Highway List and the City of Chico 2030 General Plan, no officially designated scenic vistas or scenic land units are identified within the Project Area (Caltrans 2018a; City of Chico 2017). The Proposed Project would mostly be located underground with the

exception of the proposed manhole and access road that would be located off Cohasset Road. Nonetheless, 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?	☐	☐	☐	☒

No Impact.

As stated above, according to Caltrans' list of designated State Scenic Highways and the City's 2030 General Plan, the Project Area is not located near or within a State Scenic Highway and therefore would not damage designated scenic resources, including but not limited to trees, outcroppings, and historic buildings within a state scenic highway. Furthermore, only a single, dead tree adjacent to Cohasset Road will be removed as part of the Proposed project. 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?	☐	☐	☒	☐

Less than Significant Impact.

The Project Area is located in a non-urbanized area and can be seen from the nearby public Cohasset Road and the Chico Airport Bike Path. Construction of the Project would include short-term impacts to the existing visual character. Construction activities would require the use of heavy equipment and storage of materials in staging areas identified in the Project Site Plan (Figure 2-1). During construction, excavated areas, stockpiled soils, and other materials would temporarily contribute to degradation of the scenic quality/visual landscape. Because visual degradation due to construction would be temporary, and all construction-related equipment and materials would be removed upon project completion, and all disturbed areas restored, the impact to visual character or quality of public views of the site and its surroundings is less than significant.

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) Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

No Impact.

No nightwork or temporary construction lighting is proposed as part of the Project. Thus, the Project would not create a new source of substantial light or glare which could adversely affect a day or nighttime view and no impact would occur.

4.1.3 Mitigation Measures

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

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

According to the City of Chico 2030 General Plan, few agricultural operations continue within the City while most operations exist just outside of the City limits (City of Chico 2017). The Greenline boundary, a firm boundary between urban and rural uses, has been maintained on the community's western edge for over thirty years. The Project Area is approximately 3.6 miles southwest of the Greenline boundary.

4.2.2 Regulatory Setting

4.2.2.1 California Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC) sponsors the Farmland Mapping and Monitoring Program. Important Farmland maps classify land into one of eight categories, defined as follows (DOC 2025b):

- **Prime Farmland** – land that has the best combination of features for the production of agricultural crops.
- **Farmland of Statewide Importance** – land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops.
- **Unique Farmland** – land of lesser quality soils used for the production of the state's leading agricultural cash crops.
- **Farmland of Local Importance** – land that is of importance to the local agricultural economy.
- **Grazing Land** – land with existing vegetation that is suitable for grazing.
- **Urban and Built-up Lands** – land occupied by structures with a density of at least one dwelling unit per 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public utility structures, and other developed purposes.
- **Land Committed to Nonagricultural Use** – vacant areas; existing lands that have a permanent commitment to development but have an existing land use of agricultural or grazing lands.
- **Other Lands** – land that does not meet the criteria of the remaining categories.

According to the California Resources Agency Farmland Mapping and Monitoring Program website, the entire Project Area is classified as Other Land and Grazing Land (DOC 2022a).

4.2.2.2 Williamson Act Contracts

The California Land Conservation Act of 1965, commonly known as the Williamson Act, enables local governments to enter into agreements with private landowners to restrict parcels for agricultural or

related open space use. In return, landowners receive property tax assessments that are based on farming and open space uses instead of full market value. The Open Space Subvention Act of 1971 has historically provided local governments with an annual subvention (subsidy) of forgone property tax revenues from the state; however, these payments have been suspended since 2009 due to revenue shortfalls in recent years. The Proposed Project is not under the Williamson Act contract (DOC 2022b).

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

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

No Impact.

According to the California Department of Conservation's Important Farmland Finder, the Project Area includes land designated as "Other Land" and "Grazing Land" and does not occur on lands designated as Prime, Unique, or Farmland of Statewide Importance (DOC 2022a). There would be no conversion of farmland and no impact would occur.

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

No Impact.

The Project Area is not identified as being under a Williamson Act contract and therefore would not conflict with any Williamson Act contract (DOC 2022b). No farming activities exist in the Project Area as the Project Area is zoned Airport, Public Facilities (AP) and is consistent with the Public Facilities and Services (PFS) land use classification of the Chico 2030 General Plan. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒

No Impact.

The City Zoning Ordinance does not identify the Project Area as forest land, timberland, or timberland zoned Timberland Production. No impact would occur.

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

No Impact.

No identified forest lands exist within the Project Area or in the vicinity of the Project. No impact would occur.

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

No Impact.

The Project Area is identified as Other Land and Grazing Land by the DOC (DOC 2022a). No forest land exists within the Project vicinity. The Project Area would not convert farmland to a non-agricultural use and would not convert forest land to a non-forest use. No impact would occur.

4.2.4 Mitigation Measures

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

4.3 Air Quality

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

4.3.1 Environmental Setting

The Project Area is located in the City of Chico. The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Proposed Project is located in the Northern Sacramento Valley Air Basin (NSVAB), which includes the counties of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba. The 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 AMSL, 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.

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. 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. During the summer for instance, high pressure conditions aloft can cause sinking air to form a subsidence inversion or "lid" over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog (ozone) and visibility problems. 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. The transport of pollutants near the top of the "lid" causes higher ozone (O_3) pollutant impacts in foothill areas of Butte County compared with the valley floor. Because O_3 production requires sunlight as part of the chemical reaction, O_3 concentrations are highest from late spring through early fall. Growth and urbanization in Butte County have also contributed to an increase in emissions.

In Butte County, mobile vehicle emissions are the primary source of nitrogen oxides (NO_x), a precursor to O_3 development. Wood combustion is the largest source of fine particulate matter ($PM_{2.5}$) in Butte County, particularly residential woodstove & fireplace use and managed open burning. Area wildfires can also contribute a large amount of ozone precursors and particulate matter when active.

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resource Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are O_3, carbon monoxide (CO), particulate matter (PM), NO_x, sulfur dioxide (SO_2), and

lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The portion of Butte County encompassing the Project Area is designated as a nonattainment area for the state standards for O_3 and coarse particulate matter (PM_{10}) and is designated as a nonattainment area for the federal standard of O_3 (CARB 2023).

The BCAQMD is the air pollution control agency for Butte County, including the Project Area. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the Butte County portion of the NSVAB. The BCAQMD, along with other air districts in the NSVAB, has committed to jointly prepare and implement the NSVAB Air Quality Attainment Plan for the purpose of achieving and maintaining healthful air quality throughout the air basin. The BCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities.

The significance criteria established by the BCAQMD may be relied upon to make the impact determination shown below in the Checklist Questions. The BCAQMD has published a guidance document for the preparation of the air quality portions of environmental documents that include thresholds of significance to be used in evaluating land use proposals. Thresholds of significance are based on a source's projected impacts and are a basis from which to apply mitigation measures. BCAQMD's CEQA thresholds have also been used to determine air quality impacts in this analysis. Air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual emissions exceed its identified significance thresholds, a project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulatively considerable. The BCAQMD's established thresholds of significance for air quality for construction and operations of land use development projects are shown in Table 4.3-1.

Table 4.3-1. BCAQMD Criteria Air Pollutants Significance Thresholds			
Air Pollutant	**Construction Activities**		**Operations**
	Pounds per Day	**Tons per Year**	**Pounds per Day**
Reactive Organic Gas	137	4.5	25
Carbon Monoxide	-	-	-
Nitrogen Oxide	137	4.5	25
Sulfur Oxide	-	-	-
Coarse Particulate Matter (PM_{10})	80	-	80
Fine Particulate Matter ($PM_{2.5}$)	-	-	-

Source: BCAQMD 2024

4.3.2 Air Quality (III) Environmental Checklist and Discussion

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

No Impact.

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

As previously mentioned, the Project Area is located within the Butte County portion of the NSVAB, which is under the jurisdiction of the BCAQMD. The BCAQMD is required, pursuant to the Clean Air Act (CAA),

to reduce emissions of criteria pollutants for which the NSVAB is in nonattainment. The BCAQMD attains and maintains air quality conditions in Butte County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. Their current strategies are included in the *Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan* (2024), which contains mechanisms to achieve O_3 standards. These pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and associated vehicle miles traveled projections for the region.

The *Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan* control measures are based on information derived from projected growth in Butte County to project future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Butte County and the incorporated cities in the County. As such, projects that propose development consistent with the growth anticipated by the respective general plan of the jurisdiction in which the proposed development is located would be consistent with the *Northern Sacramento Valley Planning Area Triennial Air Quality Attainment Plan* and BCAQMD's air quality planning efforts. If a project proposes a development that is less dense than that associated with the general plan, the project would likewise be consistent with BCAQMD's air quality planning efforts. If a project, however, proposes a development that is denser than that assumed in the general plan, the project may conflict with the SIP and could therefore result in a significant impact on air quality.

BCAQMD growth projections for the City of Chico are based on the Chico General Plan. The Project does not include development of new housing or employment centers and would not induce population or employment growth. Rather, the Project proposes improvements to existing sewer infrastructure. 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 air quality planning efforts. Furthermore, as shown in Table 4.3-2, Project emissions would be generated at rates below all BCAQMD significance thresholds, which were developed to achieve attainment goals in Butte County. As the Project proposes improvements to existing sewer infrastructure, it would not be a source of air quality emissions once construction is complete. As such, the Project would not conflict with the NSVAB Air Quality Attainment Plan. There would be no impact.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐

Less than Significant Impact.

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

Air quality impacts were assessed in accordance with methodologies recommended by the BCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Butte County. As the Project proposes improvements to existing sewer infrastructure, operational air pollutant emissions are discussed qualitatively. Refer to Appendix A (*Air Quality/GHG Use Model Data Outputs for the Chico Airport Pond Sewer Repair Project, ECORP Consulting Inc., November 2025*) for all CalEEMod output files.

4.3.2.1 Project Construction Emissions

Emissions associated with construction of the Proposed Project would be temporary and short-term but have the potential to represent a significant air quality impact. The basic sources of short-term emissions generated through construction of the Proposed Project include operation of the construction vehicles (i.e., tractors, forklifts, pavers) and the creation of fugitive dust during clearing and grading. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation.

Construction-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. See Appendix A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted average daily construction-generated emissions for the Proposed Project are summarized in Table 4.3-2. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur (assumed to be up to 66 days over three months per modelling inputs), but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BCAQMD's thresholds of significance.

Table 4.3-2. Construction-Related Criteria Air Pollutant Emissions						
Construction Year	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Pounds Per Day						
Construction Year One	3.24	29.20	29.80	0.06	21.00	11.30
BCAQMD Daily Significance Threshold	137	137	-	-	80	-
Exceed BCAQMD Daily Significance Threshold?	No	No	N/A	N/A	No	N/A
Tons Per Year						
Construction Year One	0.07	0.63	0.71	0.00	0.22	0.11
BCAQMD Annual Significance Threshold	4.5	4.5	-	-	-	-
Exceed BCAQMD Annual Significance Threshold?	No	No	N/A	N/A	N/A	N/A

Source: CalEEMod version 2022.1. Refer to Appendix A for Model Data Outputs.

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

Criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. Since the Project's emissions do not exceed BCAQMD thresholds, no exceedance of the ambient air quality standards would occur, and no regional health effects from Project criteria pollutants would occur. Construction impacts would be less than significant.

4.3.2.2 Project Operational Emissions

The Project proposes improvements to existing sewer infrastructure including the replacement of existing sewer pipeline, construction of a storm drain and construction of a new manhole. The Project is designed to enhance system reliability and efficiency without creating any new permanent stationary sources of criteria air pollutant emissions. The Proposed Project also includes a new road entrance off Cohasset Road to access the proposed manhole. However, vehicle trips to service the manhole would only occur during a system blockage and are not anticipated to be frequent. Thus, the Proposed Project would not generate quantifiable criteria emissions from Project operations. Operational impacts would be less than significant.

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

Less than Significant Impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project Area are residences fronting Vispera Drive approximately 0.30 mile (1,569 feet) east of the Project Area.

4.3.2.3 Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; and other miscellaneous activities. The portion of the NSVAB which encompasses the Project Area is designated as a nonattainment area for the federal O_3 standard and is also a nonattainment area for the state standards for O_3 and PM_{10} (CARB 2023). Thus, existing O_3 and PM_{10} levels in the NSVAB are at unhealthy levels during certain periods. However, as shown in Table 4.3-1, the Project would not exceed the BCAQMD's significance thresholds for emissions.

The health effects associated with O_3 are generally associated with reduced lung function. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of ROG and NO_x in the presence of sunlight. The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function, and sensitizes the lungs to other irritant. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term O_3 exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O_3 may increase the risk of respiratory-related deaths. The concentration of O_3 at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of O_3 and a

50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum O_3 concentration reaches 80 parts per billion. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the BCAQMD thresholds, which are set to be protective of human health and account for cumulative emissions in the NSVAB, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

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

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM and it contains $PM_{2.5}$ exhaust as a subset. As with O_3 and NO_x, the Project would not generate emissions of PM_{10} that would exceed the BCAQMD's thresholds. The increases of these pollutants generated by the Proposed Project would not on their own generate an increase in the number of days exceeding the NAAQS or CAAQS standards. Therefore, PM_{10} and $PM_{2.5}$ emissions, when combined with the existing PM emitted regionally, would have minimal health effect on people located in the immediate vicinity of the Project Area. Additionally, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects from these pollutants.

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

4.3.2.4 Operational Air Contaminants

The health risk public-notification thresholds adopted by the BCAQMD is 10 excess cancer cases in a million for cancer risk and a hazard index of more than one (1.0) for non-cancer risk. Examples of projects that emit toxic pollutants over long-term operations include oil and gas processing, gasoline dispensing, dry cleaning, electronic and parts manufacturing, medical equipment sterilization, freeways, and rail yards. Implementation of the Proposed Project would not result in the development of any substantial sources of air toxics. There are no stationary sources associated with the implementation of the Project. The

Project would not attract heavy-duty trucks, a substantial source of DPM emissions, which spend long periods queuing and idling at the site. The Proposed Project includes a new road entrance off Cohasset Road to access the proposed manhole. However, vehicle trips to service the manhole would only occur during a system blockage and are not anticipated to be frequent. Therefore, the Project would not be a significant source of TACs after implementation. The Project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. Operational impacts would be 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?	☐	☐	☐	☒

No Impact.

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

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, 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 Project Area. However, these emissions are

short-term in nature and would rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

Typical land uses considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified as being associated with odors. Therefore, there is no impact from the Proposed Project on odors.

4.3.3 Mitigation Measures

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

4.4 Biological Resources

This section describes the existing biological resources, including special-status species and sensitive habitats known to occur or that potentially occur in the Proposed Project Area. This information was provided in the *Biological Resources Assessment for the Chico Airport Pond Sewer Repair Project* ([BRA], Appendix B, ECORP Consulting Inc., November 2025), *Aquatic Resource Delineation for the Chico Airport Sewer Repair Project* ([ARD], Appendix C, ECORP Consulting Inc., October 2025), and *Special-Status Plant Survey Report for the Chico Airport Pond Sewer Repair Project* (Appendix F, ECORP Consulting Inc., October 2025). The Biological Study Area (BSA) assesses the potential for occurrence of special-status plants and animal species or their habitats, and other sensitive or protected resources such as migratory birds, sensitive natural communities, riparian habitat, oak woodlands, and potential Waters of the U.S. or state, including wetlands, within the Biological Study Area (BSA).

4.4.1 Methods

4.4.1.1 Literature Review

ECORP biologists performed a review of existing available information for the BSA. Literature sources included current and historical aerial imagery, any previous biological studies conducted for the area, topographic mapping, soil survey mapping available from the NRCS Web Soil Survey, USFWS National Wetlands Inventory (NWI) mapping, USFWS Critical Habitat Mapper, NMFS Essential Fish Habitat Mapper, and other relevant literature as cited throughout this document. ECORP reviewed the following resources to identify special-status plant and wildlife species that have been documented in or near the BSA:

- CDFW's CNDDB data for the "Richardson Springs, California" 7.5-minute quadrangle and the surrounding eight quadrangles (CDFW 2024b);
- CNPS Rare Plant Inventory data for the " Richardson Springs, California" 7.5-minute quadrangle and the surrounding eight quadrangles (CNPS 2024a);
- USFWS Information for Planning and Consultation Resource Report List for the BSA (USFWS 2024);
- NMFS Resources data for the "Richardson Springs, California" 7.5-minute quadrangle (National Oceanic and Atmospheric Administration [NOAA] 2016).

The results of the database queries are provided in Appendix A of the BSA. Each special-status species identified in the literature review is evaluated for its potential to occur in the BSA based on available information concerning species habitat requirements and distribution, occurrence data, and the findings of the site reconnaissance.

4.4.1.2 Site Reconnaissance

ECORP Biologist Aly Johnson conducted the site reconnaissance visit on May 6, 2024. The biologist visually assessed the BSA while walking meandering transects through all portions of the site, using

binoculars to scan inaccessible areas. The biologist collected the following biological resource information:

- Characteristics and approximate boundaries of vegetation communities and other land cover types;
- Plant and animal species or their sign directly observed;
- Characteristics and approximate extents of potential aquatic resources observed; and
- Incidental observations of special habitat features such as burrows, active raptor nests, potential bat roost sites.

The biologist qualitatively assessed and mapped vegetation communities based on dominant plant composition. Vegetation community classification was based on the classification systems presented in the Manual of California Vegetation (MCV), paying special attention to identifying those portions of the BSA with the potential to support special-status species or sensitive habitats. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were taken during the survey to provide visual representation of the conditions within the BSA.

4.4.1.3 Special-Status Plant Survey

ECORP Senior biologist Hannah Stone conducted two special-status plant surveys within the Study Area on April 19 and June 11, 2024 (Appendix F). The surveys were conducted in accordance with guidelines promulgated by USFWS (USFWS 2000), CDFW (CDFW 2009), and CNPS (CNPS 2001). The surveys coincided with the optimum identifiable periods for each of the following target species:

- Depauperate milk-vetch (*Astragalus pauperculus*)
- Big-scale balsamroot (*Balsamorhiza macrolepis*)
- Butte County calycadenia (*Calycadenia oppositifolia*)
- Spicate calycadenia (*Calycadenia spicata*)
- Silky cryptantha (Cryptantha crinite)
- Red-stemmed cryptantha (*Cryptantha rostellata*)
- Dwarf downingia (*Downingia pusilla*)
- Adobe-lily (*Fritillaria pluriflora*)
- Hogwallow starfish (*Hesperevax caulescens*)
- Butte County meadowfoam (*Limnanthes floccosa ssp. Californica*)
- Woolly meadowfoam (*Limnanthes floccosa ssp. floccose*)
- Veiny monardella (*Monardella venosa*)

- Tehama navarretia (*Navarretia heterandra*)
- Ahart's paronychia (*Paronychia ahartii*)
- Bidwell's knotweed (*Polygonum bidwelliae*)

The biologist walked meandering transects throughout the Study Area to ensure complete coverage of all suitable habitat for all target species. A list of all plants observed within the Study Area was generated and is included in Appendix C of the Special-Status Plant Survey Report (Appendix F). All species were identified to the lowest possible taxonomic level required to assess rarity. Plant species identification, nomenclature, and taxonomy followed the Jepson eFlora (Jepson eFlora 2024). Vegetation community classification was based on the classification systems presented in the MCV (CNPS 2024b). None of the targeted species were observed in the BSA during the survey.

4.4.1.4 Aquatic Resources Delineation

ECORP biologists Daniel Machek and Laurens Kuypers performed an Aquatic Resources Delineation (ARD) on March 18, 2025, in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (U.S. Army Corps of Engineers [USACE] 2008a). The biologists walked the entire Study Area to assess the site conditions of the Study Area and collect ARD data. Aquatic resources within the Study Area were recorded in the field using a post-processing capable Global Positioning System (GPS) unit with submeter accuracy (e.g., Android, Collector for ArcGIS application with Geode GNS3 submeter GPS unit with real-time correction). Results of the ARD are contained in Appendix C.

4.4.2 Environmental Setting

The BSA is located on established wastewater treatment ponds. The BSA is situated at an elevational range of approximately 195 to 210 feet AMSL in the Sacramento Valley region of the California floristic province (Jepson eFlora 2024). The average winter low temperature is 36.9 degrees Fahrenheit and the average summer high temperature is 92.9 degrees Fahrenheit; the average annual precipitation is approximately 27.39 inches at the Chico University Farm station, which is approximately 7 miles south of the BSA (NOAA 2024a).

The BSA is currently occupied by retired wastewater evaporation ponds, levees, and open grasslands. Undeveloped portions of the BSA primarily include annual grasslands, ruderal, riparian and wetland habitats. Vegetation communities and plant species composition are described in further detail below.

4.4.2.1 Vegetation Communities

The following sections describe vegetation communities and land cover types within the BSA, as observed during the site reconnaissance. A full list of plants observed onsite can be found in Appendix B. The approximate extent of vegetation communities and land cover types are depicted in BRA Figure 4 (see Appendix B).

Annual Grassland

The annual grassland community is found in the western and southeastern portions of the BSA. The annual grassland is dominated by nonnative annual grasses including Italian ryegrass (*Fetuca perennis*), foxtail barley (*Hordeum murinum*), wild oats (*Avena fatua*), and soft chess (*Bromus hordeaceus*). Italian thistle (*Carduus pycnocephalus*) is the dominant forb within the grassland.

The annual grasslands can be characterized as the *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance (CNPS 2024a). Semi-natural alliances are strongly dominated by nonnative plants that have become naturalized in the State, do not have state rarity rankings, and are not considered sensitive natural communities. The annual grasslands in this BSA near Sheep Hollow Creek exhibit riparian vegetation in the form of shrubs and medium sized oak trees.

Disturbed/Developed

The disturbed or developed land cover type is found circling the outer edge within the BSA and is composed of gravel roads and levees. These areas are either devoid of vegetation or dominated by nonnative ruderal herbaceous species, including soft chess, foxtail barley and wild oats.

4.4.2.2 Aquatic Resources

An Aquatic Resources Delineation (ARD) was conducted for the BSA and is contained in Appendix C. A total of 0.704 acre of aquatic resources were mapped within the BSA. The aquatic resources identified onsite include an intermittent drainage and ephemeral drainage. The Project Area also contains an approximately 1.67 acre stormwater and wastewater retention pond (pond). These features are identified in Figure 4 of the ARD (Appendix C) and are further described below.

Intermittent Drainage

Intermittent drainages are linear features that exhibit a bed and bank, an ordinary high-watermark (OHWM), and flow for weeks or months following significant precipitation events. Intermittent drainages differ from ephemeral drainages in that they flow for longer duration and are influenced by groundwater sources. This usually results in greater quantities and duration of flow relative to ephemeral drainages. The intermittent drainage called Sheep Hollow Creek flows east to west adjacent to and through the southern portion of the BSA. Dominant plant species observed below the OHWM within the BSA included Italian ryegrass, curly dock (*Rumex crispus*), and soft rush (*Bromus hordaeceus*). The intermittent drainage was moderately vegetated above the OHWM within the BSA. Plant species observed above the OHWM of the intermittent drainage included valley oak (*Quercus lobata*) saplings in the shrub/sapling stratum and Italian ryegrass (*Festuca perennis*).

Ephemeral Drainage

Ephemeral drainages are small-order drainages that have flowing water only during or for a short duration after precipitation events in a typical year. Ephemeral streams are located above the water table year-round. The unnamed ephemeral drainage within the Study Area exhibits an OHWM.

Pond

Ponds are inland lacustrine aquatic resources that consist of depressions that have standing water. They are perennially or intermittently inundated during the growing season depending on the source of the water and permeability of the soil. Ponds are smaller than lakes and can be formed naturally or by excavation or embanking. Ponds exhibit an OHWM and may support hydrophytic vegetation and hydric soils. There is one retired wastewater treatment pond within the BSA that was utilized for the City of Chico's wastewater treatment plant. The pond has had various modifications made in the past and currently has wastewater and stormwater comingling in the space prior to being sent into the City's sewer system.

4.4.2.3 Special-Status Species

The BSA provides habitat for a variety of wildlife species. A full list of wildlife species observed in the BSA is provided in Appendix B. A total of 15 special-status plant and wildlife species were identified as having the potential to occur within the Project Area based on the literature review and site visits. Brief descriptions of the species that have the potential to occur within the Project Area are presented below.

Plants

Based on the literature review, a total of 33 special-status plant species were identified as having the potential to occur within the vicinity of the Study Area based on the literature review (Appendix B). However, upon further analysis following the site visit, 26 plant species are presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of those species is provided in this assessment. A brief description of the remaining seven plants with potential to occur onsite is provided below.

Adobe-Lily

Adobe-Lily (*Fritillaria pluriflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial bulbiferous herb that often occurs on adobe soils in chaparral, cismontane woodland, and valley and foothill grassland. Adobe-lily blooms from February through April and is known to occur from 195 to 2,315 feet AMSL. Adobe-lily is endemic to California; the current range of this species includes Butte, Colusa, Glenn, Lake, Napa, Solano, Tehama, and Yolo counties (CNPS 2024a).

There are 11 CNDDB occurrences of adobe-lily within 5 miles of the BSA (CDFW 2024b). The grassland within the BSA may provide marginally suitable habitat. Adobe-lily has low potential to occur within the BSA.

Ahart's Paronychia

Ahart's paronychia (Paronychia ahartii) is not listed as pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. Ahart's paronychia is an annual herb that occurs in cismontane woodland, valley foothill and grassland and vernal pools. Ahart's paronychia blooms from February through June and is known to occur at elevations ranging from 100 to 1,675 feet AMSL. Ahart's

paronychia is endemic to California; the current range of this species includes Butte, Shasta, and Tehama counties (CNPS 2024a).

There are three CNDDB occurrences of Ahart's paronychia within 5 miles of the BSA (CDFW 2024b). The grassland within the BSA may provide marginally suitable habitat. Ahart's paronychia has low potential to occur within the BSA.

Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grassland, and sometimes on serpentinite soils. Big-scale balsamroot blooms from March through June and is known to occur at elevations ranging from 150 to 5,100 feet above MSL. Big-scale balsamroot is endemic to California; the current range of this species includes Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2024a).

There are no CNDDB occurrences of big-scale balsamroot within 5 miles of the BSA (CDFW 2024b). The grassland within the BSA may provide marginally suitable habitat within the BSA. Big-sale balsamroot has low potential to occur within the BSA.

Butte County Meadowfoam

Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*) is listed as endangered pursuant to both the federal and California ESAs, and is designated as a CRPR 1B.1 species. Butte County meadowfoam is an herbaceous annual that occurs in vernal pools and mesic areas of valley and foothill grasslands. Butte County meadowfoam blooms from March through May and is known to occur at elevations between 150 to 3,050 feet AMSL. Butte County meadowfoam is endemic to California; the current known range for this species is Butte County (CNPS 2024a).

There are 12 CNDDB occurrences of Butte County meadowfoam within 5 miles of the BSA (CDFW 2024b). The wastewater treatment ponds within the BSA may provide very marginal habitat. Butte County meadowfoam has low potential to occur within the BSA; however, this species was not observed during the 2024 plant surveys.

Spicate calycadenia

Spicate calycadenia (*Calycadenia spicata*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.3 species. This species is an herbaceous annual that occurs on adobe, clay, disturbed, dry, gravelly, roadsides, opening, and rocky areas of cismontane woodland and valley and foothill grasslands. Spicate calycadenia blooms from March through September and known to occur at elevations ranging from 130 to 4,595 feet above MSL. This species is endemic to California; the current range includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Nevada, Placer, Sacramento, San Joaquin, Stanislaus, Tulare, Tuolumne, and Yuba Counties (CNPS 2024a).

There are no CNDDB occurrences of spicate calycadenia within 5 miles of the BSA (CDFW 2024b). The grassland and disturbed areas in the BSA provide suitable habitat. Spicate calycadenia has potential to occur within the BSA; however, this species was not observed during the 2024 plant surveys.

Dwarf Downingia

Dwarf downingia (Downingia pusilla) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.2 species. This species is an herbaceous annual that occurs in vernal pools and mesic areas of valley and foothill grasslands. Dwarf downingia has also been found in manmade features such as tire ruts, scraped depressions, stock ponds, and roadside ditches. This species blooms from March through May and is known to occur at elevations ranging from 5 to 1,460 feet above MSL. The current range of this species in California includes Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba Counties (CNPS 2024a).

There are no CNDDB occurrences of dwarf downingia within 5 miles of the BSA (CDFW 2024b). The wastewater treatment ponds may provide marginally suitable habitat. Dwarf downingia has low potential to occur within the BSA; however, this species was not observed during the 2024 plant surveys.

Veiny Monardella

Veiny monardella (*Monardella venosa*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR1B.1 species. This species is an herbaceous annual that occurs on heavy clay soils in cismontane woodland and valley and foothill grasslands. Veiny monardella blooms from May through July and is known to occur at elevations ranging from 195 to 1,345 feet above MSL. Veiny monardella is endemic to California; the current range of this species includes Butte, Sutter, Tuolumne, and Yuba counties (CNPS 2024a).

There are no CNDDB occurrences of veiny monardella within 5 miles of the BSA (CDFW 2024b). The grassland within the BSA may provide marginally suitable habitat. Veiny monardella has low potential to occur within the BSA; however, this species was not observed during the 2024 plant surveys.

Invertebrates

A total of six special-status invertebrate species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Appendix B). However, upon further analysis following the site visit, five invertebrate species are presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of those species is provided in this assessment.

Crotch Bumble Bee

The Crotch bumble bee (*Bombus crotchii*) is a candidate for listing as endangered under the California ESA. The historic range of the Crotch bumble bee extends from coastal areas east to the edges of the desert in central California south to Baja California del Norte, Mexico, excluding mountainous areas (Thorpe et al. 1983, Williams et al. 2014). The species was historically common throughout the southern two-thirds of its range but is now largely absent from much of that area and is nearly extirpated from the center of its historic range, the Central Valley (Hatfield et al. 2014).

The Crotch bumble bee inhabits open grassland and scrub habitats (Williams et al. 2014). The species visits a wide variety of flowering plants, although its very short tongue makes it best suited to forage at open flowers with short corollas (Xerxes Society 2018). Plant families most commonly associated with Crotch bumble bee include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Xerxes Society 2018). The species primarily nests underground (Williams et al. 2014). Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or other debris (Goulson 2010, Williams et al. 2014). The flight period for Crotch bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July (Thorp et al. 1983). The flight period for workers and males is California is from late March through September with peak abundance in early July (Thorp et al. 1983).

There is one CNDDB occurrence of Crotch bumble bee within 5 miles of the BSA (CDFW 2024b). The open grass lands provide suitable habitat in the BSA. Crotch bumble bee has potential to occur within the BSA.

Fish

A total of 3 special-status fish species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Appendix B). However, upon further analysis following the site visit, all fish species are presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of those species is provided in this assessment.

Amphibians

A total of 3 special-status amphibian species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Appendix A). However, upon further analysis following the site visit, two amphibian species are presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of those species is provided in this assessment. A brief description of the remaining species is provided below.

Western Spadefoot

The northern distinct population segments (DPS) of western spadefoot (*Spea hammondii*) is proposed to be listed as threatened pursuant to the federal ESA, is not listed pursuant to the California ESA; however, it is designated as a CDFW Species of Special Concern (SSC). Necessary habitat components of the western spadefoot include loose friable soils in which to burrow in upland habitats and breeding ponds. Breeding sites include temporary rain pools, such as vernal pools and seasonal wetlands, or pools within portions of intermittent drainages (Jennings and Hayes 1994). Spadefoots spend most of their adult life within underground burrows or other suitable refugia, such as rodent burrows. In California, western spadefoot toads are known to occur from the Redding area, Shasta County southward to northwestern Baja California, at elevations below 4,475 feet (Jennings and Hayes 1994).

There are eight CNDDB occurrences of western spadefoot within 5 miles of the BSA (CDFW 2024b). The intermittent drainage within the BSA provides suitable habitat. Western spadefoot has potential to occur within the BSA.

Reptiles

A total of 3 special-status reptile species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Appendix A). However, upon further analysis following the site visit, all reptile species are presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of those species is provided in this assessment.

Birds

A total of 23 special-status bird species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Appendix A). However, upon further analysis following the site visit, 21 bird species are presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of those species is provided in this assessment. A brief description of the remaining species is provided below.

Burrowing Owl

The burrowing owl (*Athene cunicularia*) is not listed pursuant to either the California or federal ESAs; however, it is designated as a Bird of Conservation Concern (BCC) by the USFWS, a Candidate to be listed as threatened pursuant to the California Endangered Species Act (CESA), and a SSC by the CDFW. Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2020). This species typically uses burrows created by fossorial mammals, most notably the California ground squirrel (*Otospermophilus beecheyi*) but may also use manmade structures such as concrete culverts or pipes; concrete, asphalt, or wood debris piles; or openings beneath concrete or asphalt pavement (California Department of Fish and Game [CDFG] 2012). The breeding season typically occurs between February 1 and August 31 (CDFG 2012).

There are five CNDDB occurrences or burrowing owl within 5 miles of the BSA (CDFW 2024b). There are several potential burrows with signs of presence within the BSA. Burrowing owl has potential to occur within the BSA.

Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is listed as a threatened species and is protected pursuant to the California Endangered Species Act. This species nests in North America (Canada, western U.S., and Mexico) and typically winters from South America north to Mexico. However, a small population has been observed wintering in the Sacramento-San Joaquin River Delta (Bechard et al. 2020). In California, the nesting season for Swainson's hawk ranges from mid-March to late August.

Swainson's hawks nest in tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel (*Otospermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many

passerine birds, and grasshoppers (*Melanoplus* species). Swainson's hawks are opportunistic foragers and would readily forage in association with agricultural mowing, harvesting, discing, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species.

There are no CNDDB occurrences of Swainson's hawk within 5 miles of the BSA (CDFW 2024b). There is suitable nesting and foraging habitat onsite. Swainson's hawk has potential to occur within the BSA.

Mammals

A total of three special-status mammal species were identified as having the potential to occur in the vicinity of the Study Area based on the literature review (Appendix A). However, upon further analysis following the site visit, one mammal species is presumed to be absent from the Study Area due to the lack of suitable habitat. No further discussion of this species is provided in this assessment. A brief description of the remaining two species is provided below.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the federal or California ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (Philpott 1996, WBWG 2024). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges, and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards.

Although this species utilizes echolocation to locate prey, they often use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2024). There is one CNDDB occurrence of Pallid bat within 5 miles of the BSA (CDFW 2024b). The mature trees within the BSA may provide suitable day roosting habitat. Pallid bat has low potential to occur within the BSA.

Western Red Bat

The western red bat (*Lasiurus frantzii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending from southern British Columbia in Canada through Argentina and Chile in South America, and including much of the western United States. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects and generally begin to forage 1 to 2 hours after sunset. This species is considered highly

migratory; however, the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood (WBWG 2024).

There are two CNDDB occurrences of western red bat within 5 miles of the BSA (CDFW 2024b). Mature cottonwood and oak trees within the BSA provide marginally suitable habitat. Western red bat has low potential to occur within the BSA.

4.4.2.4 Critical Habitat or Essential Fish Habitat

There is no designated critical habitat mapped within the Study Area (NOAA 2024b).

Based on the literature review, anadromous fish critical habitat for Central Valley steelhead and Chinook salmon and Essential Fish Habitat for chinook salmon may be present in the "Richardson Springs, California" 7.5-minute quadrangle (NOAA 2024c). Big Chico Creek is located to the west and is outside the BSA.

4.4.2.5 Wildlife Movement Corridors and Nursery Sites

Sheep Hollow Creek and adjacent upland areas within the BSA have the potential to serve as a wildlife movement corridor for aquatic and terrestrial wildlife species. CDFW's CA Essential Habitat Connectivity mapping tool suggests that the BSA falls within the Natural Landscape Blocks mapping unit (CDFW 2024a).

4.4.3 Regulatory Setting

4.4.3.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the USFWS or the National Marine Fisheries Service (NMFS). Section 9 of the ESA prohibits the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, the ESA prohibits removing or possessing any listed plant on federal land, maliciously damaging or destroying any listed plant in any area, or removing, cutting, digging up, damaging, or destroying any such species in knowing violation of state law (16 U.S. Code [USC] 1538). Under Section 7 of ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its designated Critical Habitat. Through consultation and the issuance of a Biological Opinion, the USFWS may issue an incidental take statement allowing take of a listed species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as

hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The protections of the MBTA extend to disturbances that result in abandonment of a nest with eggs or young. The USFWS may issue permits to qualified applicants as authorized by the MBTA for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. The USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

Magnuson-Stevens Act

Essential Fish Habitat (EFH) was defined by the U.S. Congress in the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act, or Magnuson-Stevens Act, as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity." Implementing regulations clarified that waters include all aquatic areas and their physical, chemical, and biological properties; substrate includes the associated biological communities that make these areas suitable for fish habitats, and the description and identification of EFH should include habitats used at any time during the species' life cycle. EFH includes all types of aquatic habitat, such as wetlands, coral reefs, sand, seagrasses, and rivers.

Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas:

> "…that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b).

The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit.

Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality

Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

4.4.3.2 State or Local Regulations

California Fish and Game Code

California Endangered Species Act

The California ESA (California Fish and Game Code Sections 2050-2116) generally parallels the main provisions of the federal ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called candidates by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Section 2081 allows CDFW to authorize incidental take permits if species-specific minimization and avoidance measures are incorporated to fully mitigate the impacts of the project.

Fully Protected Species

The State of California first began to designate species as fully protected prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the state and/or federal ESAs. Previously, the regulations that implement the Fully Protected Species Statute (California Fish and Game Code Sections 4700 for mammals, 3511 for birds, 5050 for reptiles and amphibians, and 5515 for fish) provided that fully protected species may not be taken or possessed at any time. However, on July 10, 2023, Senate Bill 147 was signed into law, authorizing CDFW to issue take permits under the California ESA for fully protected species for qualifying projects through 2033. Qualifying projects include:

- a maintenance, repair, or improvement project to the State Water Project, including existing infrastructure, undertaken by the Department of Water Resources;
- a maintenance, repair, or improvement project critical to regional or local water agency infrastructure;
- a transportation project, including any associated habitat connectivity and wildlife crossing project, undertaken by a state, regional, or local agency, that does not increase highway or street capacity for automobile or truck travel;
- a wind project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the State to a point of junction with any California based balancing authority; or

- a solar photovoltaic project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the State to a point of junction with any California-based balancing authority.

CDFW may also issue licenses or permits for take of these species for necessary scientific research or live capture and relocation, and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 was created with the intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA is administered by CDFW and provided in California Fish and Game Code Sections 1900-1913. The Fish and Wildlife Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. The California ESA of 1984 (California Fish and Game Code Sections 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

California Fish and Game Code Special Protections for Birds

Sections 3503, 3513, and 3800 of the California Fish and Game Code specifically protect birds. Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 prohibits the take, possession, or destruction of any birds in the orders Strigiformes (owls) or Falconiformes (hawks and eagles), as well as their nests and eggs. Section 3513 prohibits the take or possession of any migratory nongame bird as designated in the MBTA. Section 3800 states that, with limited exceptions, it is unlawful to take any nongame bird, defined as all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds. These provisions, along with the federal MBTA, serve to protect all nongame birds and their nests and eggs, except as otherwise provided in the code.

Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The notification must incorporate proposed measures to protect affected fish and wildlife resources. CDFW may suggest additional protective measures during their review. A Lake or Streambed Alteration Agreement (LSAA) is the final proposal mutually agreed upon by CDFW and the applicant. Projects that require an LSAA often also require a permit from the USACE under Section 404 of the CWA. The conditions of the Section 404 permit and the LSAA frequently overlap in these instances.

California Oak Woodlands Conservation Act

The California Oak Woodlands Conservation Act was passed in 2001 to address loss of oak woodland habitats throughout the State. As a result of the Act, the Oak Woodland Conservation Program was established to provide funding for conservation and protection of California oak woodlands. Public

Resources Code Section 21083.4 went into effect as of January 1, 2005 and requires lead agencies to analyze potential effects to oak woodlands during the CEQA process. The lead agency must implement one of several mitigation alternatives, including conservation of oak woodlands through conservation easements, planting or restoration of oak woodlands, contribution of funds to the Oak Woodlands Conservation Fund, or other appropriate mitigation measures if it is determined that a project may have a significant effect on oak woodlands.

Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB also regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

California Environmental Quality Act

Per CEQA Guidelines Section 15380, a species not protected on a federal or state list may be considered rare or endangered if the species meets certain specified criteria. These criteria follow the definitions in the federal and California ESAs, and Sections 1900-1913 of the California Fish and Game Code, which deal with rare or endangered plants or animals. Section 15380 was included in the CEQA Guidelines primarily to deal with situations where a project under review may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW.

CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (i.e., rare, threatened, or endangered) species are considered significant. Assessment of impact significance to populations of non-listed species (e.g., SSC) usually considers the proportion of the species' range that will be affected by a project, impacts to habitat, and the regional and population level effects.

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Pursuant to Appendix G, impacts to biological resources would normally be considered significant if the project would:

- 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 CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on federally protected Waters of the U.S. including wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- 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;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA because although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis.

Species of Special Concern

Species of Special Concern (SSC) are defined by the CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the ESA, the California ESA or the California Fish and Game Code, but currently satisfy one or more of the following criteria:

- The species has been completely extirpated from the State or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not State) threatened or endangered, and meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.

- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with threatened habitats. Projects that result in substantial impacts to SSC may be considered significant under CEQA.

USFWS Bird of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, the USFWS published a list of BCC (USFWS 2021) for the U.S. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

California Rare Plant Ranks

The CNPS maintains the Rare Plant Inventory (CNPS 2024a), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academic, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

- Rare Plant Rank 1A – presumed extirpated in California and either rare or extinct elsewhere
- Rare Plant Rank 1B – rare, threatened, or endangered in California and elsewhere
- Rare Plant Rank 2A – presumed extirpated in California, but more common elsewhere
- Rare Plant Rank 2B – rare, threatened, or endangered in California but more common elsewhere
- Rare Plant Rank 3 – a review list of plants about which more information is needed
- Rare Plant Rank 4 – a watch list of plants of limited distribution

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 0.1 through 0.3, with 0.1 being the most threatened and 0.3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)

- Threat Rank 0.2 – Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known)

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2024b). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, 2A, or 2B are typically considered significant under CEQA Guidelines Section 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

Sensitive Natural Communities

Sensitive natural communities are vegetation communities that are imperiled or vulnerable to environmental effects of projects. CDFW maintains the California Natural Community List (CDFW 2023a), which provides a list of vegetation alliances, associations, and special stands as defined in A Manual of California Vegetation Online (MCV; CNPS 2024b), along with their respective state and global rarity ranks, if applicable. Natural communities with a state rarity rank of S1, S2, or S3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

Wildlife Movement Corridors and Nursery Sites

Impacts to wildlife movement corridors or nursery sites may be considered significant under CEQA. As part of the California Essential Habitat Connectivity Project, CDFW and Caltrans maintain data on Essential Habitat Connectivity areas. This data is available in the CNDDB. The goal of this project is to map large intact habitat or natural landscapes and potential linkages that could provide corridors for wildlife. In urban settings, riparian vegetated stream corridors can also serve as wildlife movement corridors. Nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries, bat maternity roosts, and mule deer critical fawning areas. These data are available through CDFW's Biogeographic Information and Observation System (BIOS, CDFW 2024a) database or as occurrence records in the CNDDB and are supplemented with the results of the field reconnaissance.

4.4.4 Biological Resources (IV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

4.4.4.1 Impacts to Special-Status Plants

The Project Area has the potential for 15 special-status plants to occur, as identified in the Special-Status Plant Survey Report undertaken for this project a (Appendix F). Determinate-level field surveys were conducted on April 19 and June 11, 2024, in accordance with guidelines promulgated by the USFWS (USFWS 2000), CDFW (2018b), and the CNPS (CNPS 2001). No special-status plant species or sensitive natural communities were observed within the Survey Area during the surveys. No impact would occur.

4.4.4.2 Impacts to Special-Status Wildlife

Crotch's Bumble Bee

The BSA contains suitable habitat for Crotch's bumble bee. Crotch's bumble bee primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico. If present, Crotch's bumble bee or it's nest(s) could be significantly impacted by Project construction activities. Mitigation Measure BIO-1 requires preconstruction surveys be conducted for Crotch's bumble bee, and if found, consultation with CDFW. Mitigation Measure BIO-1 would reduce impacts to less than significant levels.

Western Spadefoot

There are eight CNDDB occurrences of western spadefoot within 5 miles of the BSA (CDFW 2024b). Western spadefoot is proposed to be listed as threatened pursuant to the federal ESA, is not listed pursuant to the California ESA; however, it is designated as a CDFW SSC. Western spadefoot has potential to occur within the Project Area, specifically Sheep Hollow Creek and pond within the BSA provide a suitable habitat for the species. Implementation of Mitigation Measure BIO-2 requires preconstruction surveys for western spadefoot and outlines measures to implement if found. Mitigation Measures BIO-2 would reduce impacts to less than significant levels.

Swainson's Hawk

Swainson's hawk has the potential to occur within and immediately adjacent to the Study Area. Swainson's hawk nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban

landscapes in which the Project Area presents suitable nesting and foraging habitats onsite. Mitigation Measure BIO-3 requires preconstruction surveys for Swainson's hawk and consultation with CDFW if found. Mitigation Measure BIO-3 would reduce impacts to be required to reduce potential impacts to less than significant levels.

Burrowing Owl

Burrowing owls inhabit dry open rolling hills, grasslands, desert floors, and open bare ground with gullies and arroyos. They can also inhabit developed areas such as golf courses, cemeteries, roadsides within cities, airports, vacant lots in residential areas, school campuses, and fairgrounds (Poulin et al. 2020). Within the BSA, there are several potential burrows with signs of presence to occur in the annual grassland vegetation community. Mitigation Measure BIO-4 requires preconstruction surveys for burrowing owl and consultation with CDFW if found. Mitigation Measures BIO-4 would reduce impacts to less than significant levels.

Nesting Birds and Raptors

Osprey, loggerhead shrike, yellow-billed magpie, oak titmouse, Lawrence's goldfinch, Bullock's oriole, and other MBTA-protected birds, including raptors, have the potential to nest within the Project Area. Mitigation Measure BIO-5 requires preconstruction surveys for nesting birds and raptors. Mitigation Measure BIO-5 would reduce impacts to less than significant levels.

4.4.4.3 Impacts to Special-Status and Day-Roosting Bats

Pallid Bat and Day Roosting Bats

Pallid bat and other species of day-roosting bats have the potential to occur within suitable day-roosting habitat in mature trees within the Project Area. No trees are anticipated to be removed as part of the Proposed Project. However, if a tree is schedule to be trimmed or removed, Mitigation Measure BIO-6 requires preconstruction surveys for nesting birds and raptors. Mitigation Measure BIO-6 would reduce impacts to less than significant levels.

Western Red Bat

The foliage of trees and shrubs found within the BSA supports potential roosting habitat for western red bat. Western red bat day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. Although not observed during the site visit, the potential tree removal could significantly impact the western red bat species. If shrubs or trees are proposed to be removed or trimmed, Mitigation Measure BIO-7 requires a Bat Management Plan be drafted, outlining appropriate mitigation measures. Mitigation Measure BIO-7 would reduce impacts to less than significant levels.

While operation of the Proposed Project would not adversely impact Sheep Hollow Creek, construction of the Proposed Project may result in impaired runoff or accidental release of harmful chemicals. The potential discharge of impaired runoff during construction activities into Sheep Hollow Creek could degrade the quality of this habitat and generate a significant impact to special-status wildlife species that rely on this habitat. Mitigation Measure HYD-1 in Section 4.10.4 includes compliance with the appropriate

NPDES General Permit, and implementation of a Stormwater Pollution Prevention Plan (SWPPP) and/or adherence to erosion control BMPs prior to ground disturbance. Additionally, Mitigation Measure BIO-9 would require the Project impact limits be demarcated to limit access to avoided areas. This fencing is required to include a one-foot gap to prevent snakes and ground-dwelling animals from being caught in the fencing. Mitigation Measure BIO-10 requires that erosion control measures be placed between avoided aquatic resources and impact limits, and Mitigation Measures BIO-11 requires any fueling in the Study Area to occur at least 150 feet from potential aquatic resources. Implementation of Mitigation Measures BIO-9 through BIO-11 and HYD-1 would protect water quality in Sheep Hollow Creek by minimizing the risk of hazardous materials spills and preventing runoff of impaired water offsite. Therefore, impacts would be less than significant with mitigation incorporated.

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

Less than Significant Impact with Mitigation Incorporated.

The Project Area mainly consists of disturbed/developed land cover types and annual grasslands present in the eastern and western margins of the Project Area, as shown in BRA Figure 4 (Appendix B). The annual grasslands in the Project Area near Sheep Hollow Creek exhibit riparian vegetation in the form of shrubs and medium sized oak trees. The Proposed Project activities within the extent of the annual grasslands communities would include the construction of a new manhole and access road located on the southernly side of the Federal levee and would not involve the removal of riparian vegetation. However, as stated above, Sheep Hollow Creek has the potential to be impacted during construction through accidental release of harmful chemicals, or runoff of impaired water offsite. Implementation of Mitigation Measures BIO-9 through BIO-11 and HYD-1 would protect off-site habitat by minimizing the risk of hazardous materials spills and preventing runoff of impaired water off-site. With implementation of Mitigation Measures BIO-9 through BIO-11 and HYD-1, the Proposed Project would not adversely affect riparian habitat or other sensitive natural communities.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

Aquatic resources have been mapped within the BSA, as shown in Figure 5 of Appendix B. The aquatic features identified include an intermittent drainage and ephemeral drainage. These aquatic resources are considered potential jurisdictional waters of the U.S. and/or the State, and as such, are regulated by Sections 404 and 401 of the CWA and/or the Porter-Cologne Water Quality Control Act. The ARD prepared for the Proposed Project identified the location of the OHWM within the aquatic resources. The placement of dredged or fill material into Waters of the U.S. would require a permit pursuant to Section 404 of the CWA and certification or waiver in compliance with Section 401 of the CWA. However, the outfall elevation of the proposed storm drain line would be located above the OHWM and the Proposed Project is not anticipated to require a Section 404 permit, 401 certification, or Section 408 permit. However, if disturbance within the OHWM was to occur, these permits would be required. Mitigation Measure BIO-8 requires the Project proponent obtain all necessary permits. These permits may include a CWA Section 401 Water Quality Certification from the RWQCB, a CWA Section 404 from the USACE, a CWA Section 408 from the USACE, and a Fish and Game Code Section 1602 Streambed Alteration Agreement from the CDFW. The Project shall implement all Mitigation Measures identified in the issued permits. Additionally, implementation of Mitigation Measures BIO-9 through BIO-11 and HYD-1 would protect aquatic resources by minimizing the risk of hazardous materials spills and preventing runoff of impaired water off-site. With implementation of Mitigation Measures BIO-8 through BIO-11 and HYD-1, the Proposed Project would not adversely affect a state or federally protected wetland or aquatic resource.

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

Less than Significant Impact.

Project implementation may temporarily disturb and displace wildlife from the BSA. Some wildlife such as birds or nocturnal species are likely to continue to use BSA habitats opportunistically for the duration of

construction. Once construction is complete, wildlife movements are expected to resume. There are no documented nursery sites and no nursery sites were observed within the BSA during the site reconnaissance. Therefore, the Project is expected to have a less than significant impact on wildlife movement.

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

Less than Significant Impact with Mitigation Incorporated.

The City of Chico 2030 General Plan has policies in place for the protection of natural resources and habitats. Policies facilitate the preservation of habitat for fish and wildlife. While the Proposed Project would not directly impact these habitats, construction of the Proposed Project has the potential to indirectly impact Sheep Hollow Creek and adjacent riparian habitat and special-status species, as discussed above. Activities that would impact the special-status species or their habitats would be in conflict with the General Plan and would constitute a significant impact. Mitigation Measures Mitigation Measures BIO-1 through BIO-11 and HYD-1 would minimize impacts to biological resources, ensuring that the Proposed Project would not conflict with local policies or ordinances. Additionally, no trees are proposed to be removed as part of the Proposed Project's implementation. The Project would not conflict with a City of Chico policy or ordinance protecting biological resources, including tree preservation measures. Impacts would be less than significant with mitigation incorporated.

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

No Impact.

The Proposed Project would not conflict with an any approved local, regional, or state habitat conservation plan. No impact would occur.

4.4.5 Mitigation Measures

BIO-1: Conduct Preconstruction Surveys for Crotch's Bumble Bee

- If the Crotch's bumble bee is no longer a Candidate or formally listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.
- If the Crotch's bumble bee is legally protected under the California ESA as a Candidate or Listed species at the time ground-disturbing activities are scheduled to begin, preconstruction surveys shall be conducted in accordance with CDFW's Survey Considerations for California ESA Candidate Bumble Bee Species (CDFW 2023b) in the season immediately prior to Project implementation. A minimum of three Crotch's bumble bee preconstruction surveys shall be conducted at two- to four-week intervals during the colony active period (April through August) when Crotch's bumble bee are most likely to be detected. Non-lethal surveys shall be completed by a biologist who either holds a Memorandum of Understanding to capture and handle Crotch's bumble bee (if netting and chilling protocol is to be utilized), or by a CDFW-approved biologist who is experienced in identifying native bumble bee species (if surveys are restricted to visual surveys that will provide high-resolution photo documentation for species verification). The surveyor shall walk through all areas of suitable habitat focusing on areas with floral resources. Surveys shall be completed at a minimum of one person-hour of searching per 3 acres of suitable habitat during suitable weather conditions (sustained winds less than 8 miles per hour, mostly sunny to full sun, temperatures between 65 and 90 degrees Fahrenheit) at an appropriate time of day for detection (at least one hour after sunrise and at least two hours before sunset, though ideally between 9:00 a.m. and 1:00 p.m.)
- If Crotch's bumble bees are detected, CDFW shall be notified by the designated biologist as further coordination may be required to avoid or mitigate certain impacts. At a minimum, two nesting surveys shall be conducted with focus on detecting active nesting colonies within one week and the final survey within 24 hours prior to ground-disturbing activities that are scheduled to occur during the flight season (February through October). If an active Crotch's bumble bee nest is detected, an appropriate no-disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established around the nest to reduce the risk of disturbance or accidental take and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified biologist deems the nesting colony is no longer active. If no nests are found but the species is present, a full-time qualified biological monitor shall be present during vegetation or ground-disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). Because bumble bees move nest sites each year, two preconstruction nesting surveys shall be required during each subsequent year of construction, regardless of the previous

year's findings, whenever vegetation and ground-disturbing activities are scheduled to occur during the flight season if nesting and foraging habitat is still present or has re-established.

BIO-2: Conduct Preconstruction Surveys for Western Spadefoot

- A qualified biologist shall conduct at least one set (up to two sets spaced at least 10 days apart) of preconstruction daytime and nighttime surveys for all life stages of western spadefoot to be conducted when surface water is ponded in aquatic features if feasible between December through March (when suitable environmental conditions are met) prior to Project initiation. Surveys will be conducted during or following rain events and in nonfreezing temperatures. Daytime surveys of aquatic features will be conducted with the aid of binoculars and polarized sunglasses for all life stages of western spadefoot as well as adjacent upland habitat for burrowing adults and juveniles. Nighttime audio detection and eye-shine surveys will be conducted with the aid of binoculars and flashlight for calling males in and near aquatic features.
- A preconstruction survey report shall be prepared and submitted to the USFWS and CDFW, as appropriate, that includes the methods, results, and recommendations based on the survey. If the preconstruction survey(s) are conducted according to the above methods and no detections of western spadefoot occur within the Study Area, then no further measures need to be taken. If the preconstruction survey(s) are conducted according to the above methods and there are detections of western spadefoot within the Study Area, then the qualified biologist will relocate the individuals to suitable breeding habitat (aquatic features that pond water for 30+ days) outside of the Study Area and the following measures will be implemented.
    - No Project activities shall occur from 30 minutes before local sunset time to 30 minutes after local sunrise time, and 48 hours after a significant rain event with a National Weather Service forecast of greater than or equal to 0.5 inch of rainfall within a 24-hour period.
    - No equipment or vehicle refueling, maintenance, or staging shall occur within 100 feet of an aquatic feature that represents western spadefoot breeding habitat, as determined by a qualified biologist. The Project will coordinate the location of the equipment and vehicle staging area with the qualified biologist.
    - Wildlife exclusion fencing will be installed around aquatic features that represent western spadefoot breeding habitat and shall be checked daily by a qualified biologist to relocate encountered individuals and ensure the fencing is intact and functioning properly. Wildlife exclusion fencing installed around aquatic features with positive detections of western spadefoot will be installed 40 meters from the extent of the aquatic feature. Project personnel will allow any encountered individuals to leave the site on

their own volition or will be relocated by a qualified biologist to suitable breeding habitat.

- Prior to installation of wildlife exclusion fencing, a qualified biologist will conduct a clearance survey of the aquatic features and associated upland habitat. Wildlife exclusion fencing shall be installed under supervision and direction of a qualified biologist to avoid small mammal burrow refugia to the greatest extent possible.
- Any erosion or sediment control devices (such as straw wattles or erosion blankets) implemented within 500 feet of aquatic features that represent western spadefoot breeding habitat shall not contain materials that could cause entanglement of western spadefoot such as monofilament or any other nonbiodegradable material.

BIO-3: Conduct Preconstruction Surveys for Swainson's Hawk

- If Project activities are scheduled during the Swainson's hawk nesting season (March 1 to August 31), then prior to beginning work on the Project a qualified biologist shall survey for Swainson's hawk nesting activity. The survey area shall include a 0.5-mile distance surrounding the Project Area. The qualified biologist shall conduct surveys according to the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000) or, if proposing an alternate survey methodology, shall submit the proposed survey timing and methods to CDFW for review and written approval prior to initiation of surveys. Survey results shall be submitted to CDFW for review. If Swainson's hawk nesting activity is observed during the survey, then the survey results shall be submitted to CDFW for review and acceptance prior to starting Project activities. If the qualified biologist identifies nesting Swainson's hawks, then the biologist shall recommend a no-disturbance buffer, and the contractor shall implement the buffer under the supervision of a qualified biologist. Project activities shall be prohibited within the no-disturbance buffer between March 1 to August 31, unless otherwise approved in writing by CDFW, which may include consultation pursuant to California ESA, or a qualified biologist determining that the nest is no longer active. If there is a lapse in Project-related work of 14 days or longer, then an additional survey shall be conducted prior to resuming Project activities.

BIO-4: Conduct Preconstruction Surveys for Burrowing Owl

- Protocol-level preconstruction surveys for burrowing owl shall be conducted by a qualified biologist within the Project Area and a 250-foot buffer around the Project Area in accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012). No further measures are necessary if the preconstruction surveys find that burrowing owl are not using the Project Area or within 250- feet of the Project Area.

A report documenting the methods, results, and recommendations based on the results of the surveys shall be prepared.

- If the Project Area supports burrowing owl using burrows within the Project Area or within 250-feet of the Project Area, then project-related impacts shall be avoided to the greatest extent feasible and avoidance and minimization measures shall be developed and implemented prior to commencement of Project activities. If proposed project activities may impact owls or their burrows and exclusion and/or relocation measures are recommended by the biologist, then measures will be agreed upon in writing by CDFW prior to activities occurring within 250-feet of the burrows.

BIO-5: Conduct Preconstruction Surveys for Nesting Birds and Raptors

- If construction is to occur during the nesting season (generally February 1 - August 31), conduct a pre-construction nesting bird survey of all suitable nesting habitat within 14 days prior to construction. The survey shall be conducted within a 500-foot radius of Project work areas for raptors and within a 100-foot radius for other nesting birds. If any active nests are observed, these nests shall be designated an environmentally sensitive area and protected by an avoidance buffer established in coordination with a qualified biologist until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival.

BIO-6: Conduct Habitat Assessment for Pallid Bat and Day Roosting Bats

- If trees are scheduled to be removed or trimmed, then a qualified bat biologist will conduct a bat habitat assessment for suitable bat roosting habitat prior to any construction activities. However, it is noted that no tree removal is currently proposed. The habitat assessment should be conducted one year prior to the initiation of construction activities, if feasible, and no less than 30 days prior to the initiation of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat and/or signs of bat use are identified during the assessment, the roosting habitat should be avoided to the extent possible.
- If avoidance of the identified bat roosting habitat is not feasible, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting bats. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees. The Project-specific Bat Management Plan shall include the requirement for an emergence and/or preconstruction survey for roosting bats, roost removal timing and methodology; and will include as necessary and appropriate the inclusion of acoustic monitoring, no-disturbance buffers, methods and materials for passive exclusion of bats, species-specific habitat replacement mitigation, and/or post-construction mitigation monitoring.

- Emergence surveys shall not be conducted during the bat inactive/hibernation period (typically October 15 through March 1, or when nighttime low temperatures are 45 degrees Fahrenheit or lower and rain is not over 0.5 inch in 24 hours), as bats are not detectable using emergence survey methods during their inactive period. If a maternity roost is located, that roost will remain undisturbed until after the maternity season or until a qualified biologist has determined the roost is no longer active.
- If tree removal/trimming occurs outside of the bat maternity season and outside of bat hibernation season, tree removal during the weather parameters described shall be conducted after bat exclusion has been installed and left in place for no less than three days prior to removal/trimming, or using the two-step tree removal methods described below:
    - As much as feasible, vegetation and trees within the area that are not suitable for roosting bats will be removed first to provide a disturbance that may reduce the likelihood of bats using the habitat.
    - Two-step tree removal will occur over two consecutive days under the supervision of a qualified bat biologist. On Day 1, small branches and small limbs containing no cavity, crevice, or exfoliating bark habitat on habitat trees (or outer fronds in the case of palm trees), as identified by a qualified bat biologist are removed first, using chainsaws only (i.e., no dozers, backhoes). The following day (Day 2), the remainder of the tree is to be felled/removed. The intention of this method is to disturb the tree with noise and vibration and branch removal on Day 1. This should cause any potentially present day-roosting bats to abandon the roost tree after they emerge for nighttime foraging. Removing the tree quickly the next consecutive day should avoid reoccupation of the tree by bats. If bats are observed during the two-step removal process, the biologist will be notified, the tree will be left until the next day, and the biologist will inspect the tree to ensure the tree does not contain bats prior to disturbance. If bats remain the following day, CDFW will be notified and measures will be submitted, such as methods for passive bat exclusion, for written acceptance prior to implementation and tree disturbance.
- If bat roost mitigation is required, roost mitigation will be installed as far in advance of the bat maternity season as possible, but no less than 30 days prior to roost removal.

BIO-7: Bat Management Plan for Western Red Bat

- If shrubs or trees are proposed to be removed or trimmed and determined by a qualified bat biologist to be suitable day-roosting habitat for western red bat, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting western red

bats. However, it is noted that no shrub or tree removal is proposed. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees and shrubs. The Project-specific Bat Management Plan shall include the requirement for preconstruction acoustic surveys for western red bats, a requirement for a preconstruction survey report including methods, results, and recommendations based on the acoustic survey submitted to CDFW, roost removal timing outside of the maternity and hibernation seasons and methodology; and will include as necessary and appropriate the inclusion of no-disturbance buffers, methods and materials for bat deterrents, and/or species-specific habitat replacement mitigation.

BIO-8: Obtain Required Permits and Implement Associated Conditions

- Prior to the start of construction activities, the City of Chico will obtain all necessary regulatory permits for this Project. These permits may include a CWA Section 401 Water Quality Certification from the RWQCB, a CWA Section 404 from the USACE, and a Fish and Game Code Section 1602 Streambed Alteration Agreement from the CDFW. The Project shall implement all Mitigation Measures identified in the issued permits.

BIO-9: Mark Project Impact Limits

The Project impact limits shall be clearly demarcated prior to construction and all workers shall be made aware of the impact limits and avoided areas. If orange construction fencing is to be used, it shall be placed such that there is a one-foot gap between the ground and the bottom of the fencing to prevent snakes and other ground-dwelling animals from being caught in the fencing. No work shall occur outside of the Project impact limits. All vehicles and equipment shall be restricted to the Project impact limits and/or existing designated access roads and staging areas.

BIO-11: Implement Erosion Control Measures near Aquatic Resources

Erosion control measures shall be placed between avoided aquatic resources and the outer edge of the impact limits prior to commencement of construction activities and shall be maintained until construction is completed and soils have been stabilized. Plastic monofilament netting or similar material shall not be used for erosion control, because smaller wildlife may become entangled or trapped in it. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers or tackified hydroseeding compounds.

BIO-11: Refueling Procedures

Any fueling in the Study Area shall use appropriate secondary containment techniques to prevent spills and shall occur at least 150 feet from potential aquatic resources.

4.5 Cultural Resources

4.5.1 Environmental Setting

ECORP prepared a Cultural Resources Inventory Report for the Proposed Project (ECORP 2025, Appendix D) 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 cultural context of the Project Area, including regional and local prehistory, ethnography, and regional and Project Area histories can be found in the report in Appendix D.

4.5.1.1 Regional Pre-Contact History

It is generally believed that human occupation of California began at least 10,000 years before present (BP). The archaeological record indicates that between approximately 10,000 and 8,000 BP, a predominantly hunting economy existed, characterized by archaeological sites containing numerous projectile points and butchered large animal bones. Animals that were hunted probably consisted mostly of large species still alive today. Bones of extinct species have been found but cannot definitively be associated with human artifacts. Although small animal bones and plant grinding tools are rarely found within archaeological sites of this period, small game and floral foods were probably exploited on a limited basis. A lack of deep cultural deposits from this period suggests that groups included only small numbers of individuals who did not often stay in one place for extended periods (Wallace 1978).

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 BP, is sometimes referred to as the Millingstone Horizon (Wallace 1978). Projectile points are found in archaeological sites from this period, but they are far fewer in number than from sites dating to 8,000 BP. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period (Wallace 1978).

Archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments in sites dating to after about 5,000 BP. 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. New peoples from the Great Basin began entering Southern California during this period. These immigrants, who spoke a language of the Uto-Aztecan linguistic stock, seem to have displaced or absorbed the earlier population of Hokan-speaking peoples. During this period, known as the Late Horizon, population densities were higher than before, and settlement became concentrated in villages and communities along the coast and interior valleys (Erlandson 1994; McCawley 1996). Regional subcultures also started to develop, each with its own geographical territory and language or dialect (Kroeber 1925; McCawley 1996; Moratto 1984). These were most likely the basis for the groups that the first Europeans encountered during the 18th century (Wallace 1978). Despite the regional differences, many material culture traits were shared among groups, indicating a great deal of interaction (Erlandson

1994). The presence of small projectile points indicates the introduction of the bow and arrow into the region sometime around 2,000 BP (Moratto 1984; Wallace 1978).

4.5.1.2 Local Pre-Contact History

This section provides a regional overview of prehistoric context for California's Central Valley Region, where the Area of Potential Effects (APE) is located (Rosenthal et al. 2007).

California's Great Central Valley has long held the attention of archaeologists and was a focus of early research in California. Archaeological work during the 1920s and 1930s led to a cultural chronology for central California, presented by Lillard, Heizer, and Fenenga in 1939. This chronology was based on the results of excavations conducted in the lower Sacramento River Valley. This chronology identified three cultures based on artifacts from the archaeological record. These cultures were named Early, Transitional, and Late (Lillard et al. 1939).

Heizer (1949) redefined the description of these three cultures. He subsumed the three cultural groups into three time periods, designated the Early, Middle, and Late horizons. He primarily focused his research and reexamination of Lillard et al. (1939) on the Early Horizon, which he named Windmiller. He also intimated that new research, and a reanalysis of existing data would be initiated for cultures associated with the Middle and Late horizons; however, he did not complete this work and other research filled in the gaps.

Following years of documenting artifact similarities among resources in the San Francisco Bay region and the Delta, Beardsley (1948, 1954) formatted his findings into a cultural model known as the Central California Taxonomic System (CCTS). This system proposed a linear, uniform sequence of cultural succession in Central California, and explicitly defined Early, Middle, and Late horizons for cultural change. Archaeological researchers have subsequently refined and redefined aspects of the CCTS. For instance, Fredrickson (1973, 1974, and 1994) reviewed general economic, technological, and mortuary traits between archaeological assemblages across the region. He separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (12,000 to 8,000 BP); Lower, Middle, and Upper Archaic (8,000 BP to AD 500) and Upper and Lower Emergent (AD 500 to 1800).

Frederickson further defined three cultural patterns: The Windmiller (named after Heizer 1949 and Lillard et al. 1939), the Berkeley, and the Augustine patterns, and assigned them to the Early, Middle, and Late horizons of the CCTS. These patterns were defined to reflect the general sharing of lifeways within groups in a specific geographic region. The Windmiller pattern of the Early Horizon included cultural patterns dating from 5,000 to 3,000 BP; the Berkeley Pattern of the Middle Horizon (also known as the Cosumnes Cultural Pattern after Ragir 1972), included cultural patterns dating from 3,000 BP to AD 500, and the Augustine Pattern of the Late Horizon included the cultural patterns from AD 500 to the historic period.

Fredrickson's (1974) Paleo-Archaic-Emergent cultural sequence was redefined by Rosenthal, White, and Sutton (2007). Rosenthal et al.'s recalibrated sequence is divided into three broad periods: The Paleoindian Period (11,550 to 8,550 BP); the three-staged Archaic period, consisting of the Lower Archaic (8,550 to 5,550 BP), Middle Archaic (5,550 to 550 BP), and Upper Archaic (550 BP to AD 1100); and the Emergent Period (AD 1100 to Historic) (Rosenthal et al. 2007). The three divisions of the Archaic Period correspond to climate changes. This is the most recently developed sequence and is now commonly used to interpret Central California pre-contact history. The aforementioned periods are characterized by the following:

4.5.1.3 Methods

Records Search

ECORP conducted a records search for the APE at the Northeast Information Center (NEIC) of the CHRIS at California State University, Chico on February 20, 2025 (NEIC File No. NE25-78; Appendix A). The purpose of the records search is to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the APE, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. NEIC staff completed and returned the records search to ECORP on February 25, 2025.

In addition to the official records and maps for archaeological sites and surveys in Butte County, ECORP reviewed the following historic references: Built Environment Resource Directory (BERD) for Butte County (OHP 2023); Archaeological Resources Directory of Butte County (OHP 2022); the National Register Information System (National Park Service [NPS] 2022); OHP, California Historical Landmarks (CHL; OHP 2022); CHL (OHP 1996 and updates); California Points of Historical Interest (OHP 1992 and updates; Caltrans Local Bridge Survey ([Caltrans] 2019); Caltrans State Bridge Survey (Caltrans 2018b); and Historic Spots in California (Kyle 2002).

Other references examined include a RealQuest Property Search and historic General Land Office (GLO) land patent records (Bureau of Land Management [BLM] 2022). ECORP reviewed the following maps:

- 1866 BLM GLO Plat Map for Township 22 North, Range 1 East, Mount Diablo Base and Meridian
- 1891 USGS Chico, California topographic quadrangle (1:125,000 scale)
- 1912 USGS Keefers, California topographic quadrangle (1:31,680 scale)
- 1944 USGS Richardson Springs, California topographic quadrangle (1:62,500 scale)
- 1951 USGS Richardson Springs, California topographic quadrangle (1:24,000 scale)
- 1951 (photorevised 1969) USGS Richardson Springs, California topographic quadrangle (1:24,000 scale)

ECORP reviewed aerial photographs from 1941, 1947, 1958, 1969, 1984, 1998, 2005, 2009, and every 2 years from 2010 to 2025 for any indications of APE usage and built environment.

ECORP conducted a search for a local historical registry, which revealed the City of Chico's Historic Resources Inventory.

Sacred Lands File Coordination Methods

In addition to the records search, ECORP contacted the California Native American Heritage Commission (NAHC) on February 20, 2025 to request a search of the Sacred Lands File for the APE. This search determines whether the California Native American tribes within the APE have recorded Sacred Lands, because the Sacred Lands File is populated by members of the Native American community with knowledge about the locations of tribal resources. In requesting a search of the Sacred Lands File from the NAHC, ECORP solicited information from the Native American community regarding tribal cultural resources (TCRs), but the responsibility to formally consult with the Native American community lies exclusively with the federal and local agencies under applicable state and federal laws. The lead agencies do not delegate government-to-government authority to any private entity to conduct tribal consultation. A search of the Sacred Lands File by the California NAHC returned a negative result and failed to indicate the presence of Native American cultural resources within the Project Area.

Other Interested Party Consultation Methods

ECORP contacted the Chico History Museum on February 20, 2025 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area (Appendix D).

Field Methods

ECORP subjected the APE to an intensive pedestrian survey on March 18, 2025, under the guidance of the Secretary of the Interior's Standards for the Identification of Historic Properties (NPS 1983), using 15-meter transects (Figure 3). At the time, ECORP archaeologists examined the ground surface for indications of surface or subsurface cultural resources and inspected the general morphological characteristics of the ground surface for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, the archaeologists examined the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances for artifacts or for indications of buried deposits. ECORP did not conduct any subsurface investigations or artifact collections during the pedestrian survey. No new cultural or paleontological resources were identified in the APE during the survey.

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

4.5.2 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?	☐	☐	☐	☒

No Impact.

The records search and 2025 field survey identified two newly built environment resources within or immediately adjacent to the Project Area: CA-01 (Chico-Mud Creek - Unit 3 East Sycamore RT Levee System) and CA-02 (Chico Army Airfield Wastewater Treatment Plant). These resources were evaluated using National Register of Historic Places (NRHP) and CRHR eligibility criteria and determined not eligible. Therefore, no Historic Properties under Section 106 of the National Historic Preservation Act (NHPA) or Historical Resources under CEQA would be affected and the Proposed Project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section §15064.5. There would be no impact.

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

Less than Significant Impact with Mitigation Incorporated.

No archeological resources within the Project Area have been previously determined to be eligible for the NRHP or the California Register of Historic Resources (CRHR) under CEQA or Historic Properties under Section 106 National Historic Preservation Act (NHPA). A search of the Sacred Lands File by the California NAHC returned a negative result and failed to indicate the presence of Native American cultural resources within the Project Area.

Before the existing development within the Project Area, the Project Area was considered to have a *moderate* potential for buried archaeological deposits because the underlying geology contains alluvium deposits, which tend to preserve archaeological material when waterways flood and overflow their banks, creating an increased likelihood for pre-contact archaeological resources to be located along perennial waterways. Several factors, however, reduce the potential to *low*. The construction of the Chico Wastewater Treatment Plant and Chico-Mud Creek-Unit 3 East Sycamore RT Levee System would have disturbed the upper portion of the soil, and the lack of pre-contact resources documented within 0.5 mile of the Project Area suggests a lower overall potential for buried pre-contact resources; therefore, the potential for intact, buried pre-contact resources within the Project Area is less than significant.

However, there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources. Therefore, the Proposed Project would implement Mitigation Measure CUL-1, which would ensure impacts would be less than significant.

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

Less than Significant Impact with Mitigation Incorporated.

Based on the records search results and field surveys conducted for the Proposed Project, no human remains have been identified in the Project Area. However, Project implementation would include ground-disturbing construction activities that could result in the advertent disturbance and/or discovery of human remains, which would be a potentially significant impact. With implementation of Mitigation Measure CUL-1, this impact would be less than significant with mitigation incorporated.

4.5.3 Mitigation Measures

CUL-1: Stop Work in the Event of Unanticipated Discovery of Potential Cultural Resources and/or Human Remains and Evaluate the Find

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of human remains and a 25-foot radius of non-human findings. The Contractor must immediately notify the City of Chico Public Works Engineering at (530) 879-6900, pursuant to Health and Safety Code 7050.5. The supervising contractor shall be responsible for reporting any such findings to the Engineer. No work may occur within the buffer until the City has made the necessary findings as to the origins and dispositions of the remains pursuant to the Public Resources Code 5097.98.

A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

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

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

- If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the 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.

4.6 Energy

Energy consumption is analyzed according to the potential direct and indirect environmental impacts associated with the construction of the Proposed Project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during the construction. As the Project is proposing improvements to existing sewer and stormwater infrastructure and a new access road, the impact analysis focuses on the source of energy that is relevant to the Proposed Project: the equipment-fuel necessary for Project construction and routine operation and maintenance.

4.6.1 Environmental Setting

4.6.1.1 Electricity Services

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity, closely followed by renewables, large hydroelectric and nuclear (California Energy Commissions [CEC] 2025). Pacific Gas & Electric (PG&E) provides electricity and natural gas to Butte County. The company has various sources of clean power to offer its customers, stating that in 2023, 100 percent of retail customers' electricity comes from GHG-free resources, including renewables, nuclear, and hydroelectric power. Furthermore, approximately 34 percent of their total electricity delivered to retail customers came from specified eligible-renewable resources, including solar and wind power, small hydroelectric generation and biopower. PG&E retail customers also received 53% of their electric deliveries from carbon-free nuclear power generated by Diablo Canyon Power Plant, and 13% from large hydroelectric power (PG&E 2024). The company currently provides approximately 16 million people with electricity and natural gas throughout the state of California.

The California Public Utilities Commission (CPUC) regulates PG&E. The CPUC has developed energy efficiency programs such as smart meters, low-income programs, distribution generation programs, self-generation incentive programs, and a California solar initiative. Additionally, the California Energy Commission (CEC) maintains a power plant database that describes all the operating power plants in the state by county.

4.6.1.2 Energy Consumption

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

Gasoline and diesel consumption in Butte County from 2020 to 2024 is shown in Table 4.6-1. As shown, both gasoline and diesel consumption have decreased since 2024.

Table 4.6-1. Fuel Consumption in Butte County 2020-2024		
Year	**Gasoline Consumption**	**Diesel Consumption**
2024	72,218,881	26,400,600
2023	74,364,847	26,733,181
2022	73,515,170	27,422,619
2021	78,664,487	27,922,429
2020	80,595,896	28,182,496

Source: CARB 2021; 2022

4.6.2 Energy (VI) Environmental Checklist and Discussion

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

Less than Significant Impact.

The impact analysis focuses on the source of energy are relevant to the Proposed Project: the equipment-fuel necessary for Project construction. Routine maintenance of the Proposed Project's infrastructure would generate minimal vehicular trips and negligible operational emissions. 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. For the purpose of this analysis, the amount of diesel and gasoline fuel necessary for Project construction is calculated, totaled and compared to that consumed in Butte County in 2024.

The amount of on-road construction-related fuel use was estimated using average county fuel economy found in CARB's Emission Factor (EMFAC) 2021 (2022). EMFAC 2021 is a mathematical model that was developed to calculate emission rates and rates of gasoline and diesel consumption from motor vehicles that operate on highways, freeways, and local roads in California. EMFAC also provides annual vehicle miles traveled, which was used to calculate the average countywide fuel economy of both gasoline and diesel vehicles. The fuel consumption of Project construction off-road equipment was also modeled, using a combination of the California Emissions Estimator Model (CalEEMod) (see Appendix A) and CARB's

OFFROAD2021 version 1.0.7 (CARB 2021). Fuel consumption associated with the Proposed Project is summarized in Table 4.6-2 (see Appendix E – Energy Consumption Analysis for the Chico Airport Pond Sewer Repair Project, ECORP Consulting Inc., November 2025).

Table 4.6-2. Proposed Project Fuel Consumption

Energy Type	Annual Fuel Consumption	Percentage Increase Countywide
Construction (Diesel)[1,2]	19,683 gallons	0.0744 percent
Construction (Gasoline)[3]	507 gallons	0.0007 percent

Source: [1]CalEEMod (CAPCOA 2022); [2]OFFROAD2021 (CARB 2021); [3]EMFAC2021 (CARB 2022)

Notes: Project construction increases in fuel consumption is compared with the countywide fuel consumption in 2024, the most recent full year of data.

Construction of the Project is anticipated to last up to 66 days over three months. Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project Area. The fuel expenditure necessary for sewer infrastructure improvements would be temporary, lasting only as long as Project construction. As indicated in Table 4.6-2, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 507 gallons, which would increase the annual countywide gasoline fuel use by 0.0007 percent. Additionally, the Project is estimated to consume 19,683 gallons of diesel fuel, which would be 0.0744 percent of the County's annual diesel fuel consumption. As such, Project construction would have a nominal effect on local and regional energy supplies. No unusual Project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the state. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. Once construction is complete the Project would not be a significant source of energy consumption or fuel usage. For these reasons, impacts would be less than significant.

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

No Impact.

The Project proposes improvements to existing sewer and stormwater infrastructure, with construction fuel as the only source of energy use. The Proposed Project would be constructed in a manner consistent with state regulations, including compliance with California's fuel efficiency and emissions standards for off-road construction equipment. Additionally, the Project does not introduce new operational energy demands and would not conflict with any local or regional energy efficiency plans. The Proposed Project 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

The Project Area is relatively flat with an elevation of approximately 200 feet AMSL. The Project Area lies within the Sacramento Valley which is characterized by flat to gently rolling topography.

4.7.1.1 Geomorphic Setting

The City of Chico is located within the Great Valley Geomorphic Province (Great Valley), which includes the Great Central Valley of California. The Great Valley extends 400 miles north to south and 60 miles east to west and is encompassed by the Coast Ranges, the Klamath Ranges, the Cascade Range, and the Sierra Nevada Range. The Great Valley has been filled with layers of sedimentary deposits ranging in age from Jurassic to recent. The City is underlain by various geologic formations, including the Tuscan Formation, the Chico Formation, the Red Bluff Formation, and the Modesto Formation. The Tuscan Formation consists of a series of layers deposited by streams and mudflows between two and four million years ago. Groundwater in the Sacramento Valley Groundwater Basin, which is within the Great Valley, is contained primarily within the Tuscan Formation. The topography of the City varies from relatively gentle sloped terrain in the western portion of the City to increasingly hilly terrain at the eastern edge of the City where it meets the base of the Sierra Nevada foothills. Average elevation throughout the City is approximately 230 feet AMSL (City of Chico 2010).

4.7.1.2 Regional Seismicity and Fault Zones

The Alquist-Priolo Act defines an "active" fault as one that has shown seismic activity during the Holocene period, within the past 11,000 years, and therefore is considered more likely to generate a future earthquake and surface rupture than a fault that shows no sign of "recent" rupture. The United States Geological Survey (USGS) National Seismic Hazard Map identifies the City as being located in a high seismic hazard area (USGS 2018). There are no active faults within the City; however, there are several faults located within the Sierra Foothills east of the City, but most are not considered active. The only known active fault in Butte County is the Cleveland Hills Fault south of Oroville, approximately 28 miles southeast of the Project Area (City of Chico 2010). According to the California Department of Conservation's Fault Activity Map of California, no faults are located within the Project Area. The nearest fault to the Project Area is the potentially active late Quaternary Monocline Fault, which is located approximately 2.60 miles east of the Project Area (DOC 2022c; City of Chico 2010). Additionally, the Project Area is not located in an earthquake, fault, liquefaction, or landslide zone, as defined by the State Department of Conservation and California Geological Survey (DOC 2025a).

4.7.1.3 Soils

A custom soil resource report was queried for the Project Area through the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS, 2024). Results indicated that the Project Area includes multiple soil types, including Redtough-Redswale, Wafap-Hamslough, Redsluff gravelly loam, and Xerofluvents. However, construction of project elements would only take place on Redtough-Redswale

and Redsluff gravelly loam soils. Redtough-Redswale is somewhat poorly drained and Redsluff gravelly loam is moderately well drained. Expansive soils can shrink and swell with drying and wetting. The shrink-swell potential of expansive soils can result in differential movement beneath foundations. Soils in the project area have a low to moderate shrink-swell potential (NRCS, 2025).

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. A soil's rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil, while a soil's rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. Redtough-Redswale has a high risk of corrosion for uncoated steel and a low risk for concrete. Redsluff gravelly loam has a moderate risk of erosion for uncoated steel and concrete (NRCS, 2025). The proposed strorm drain line would be constructed of HDPE, which is corrosion resistant.

Liquefaction is the sudden loss of soil strength caused by seismic forces acting on water-saturated soil, leading to a "quicksand" condition generating various types of ground failure. Soils comprised of sand and sandy loams that are in areas with high groundwater tables or high rainfall are subject to liquefaction. 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. The depth to groundwater varies from approximately 2 to 80 inches within the Project Area (NRCS, 2025).

Regulatory Framework

4.7.1.4 Federal

Earthquake Hazard Reduction Act

In October 1997, the U.S. Congress passed the National Earthquake Hazards Reduction (NEHR) Act to reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program. Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The NEHR Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by the NEHR Act, which refined the description of agency responsibilities, program goals, and objectives. The NEHR Act designates Federal Emergency Management Agency (FEMA) as the lead agency of the program. Other NEHR Act agencies include the National Institute of Standards and Technology, National Science Foundation, and the U.S. Geological Survey (USGS).

4.7.1.5 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code [PRC] § 2621 to § 2630) was passed by the California Legislature in 1972 to reduce losses from surface fault rupture. The Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of

active faults. Before a project can be permitted in a designated Alquist-Priolo Fault Study Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (PRC §§ 2690–2699.6) provides for a statewide seismic hazard mapping and technical advisory program to assist cities and counties in protecting the public health and safety from the effects of strong ground shaking, liquefaction, landslides or other ground failure and other seismic hazards caused by earthquakes. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils

4.7.1.6 Local

City of Chico Municipal Code

City of Chico Municipal Code Chapter 15.50 governs stormwater management and discharge. The chapter prescribes regulations to prohibit non-stormwater discharges to the City's storm drain system and to reduce the discharge of pollutants. The regulations require applicants for development projects disturbing over 1 acre to file a Stormwater Pollution Prevention Plan (SWPPP) with the State to gain coverage of the activity under the City's Construction General Permit.

Chapter 16.22 of the City of Chico Municipal Code contains the City's grading standards. The standards specify that the maximum permanent rate of sediment loss after completion of a project should not exceed the natural erosion rate which occurred prior to the grading project. In addition, if excessive erosion occurs from the project, erosion and sediment control measures are required to be immediately implemented to reduce erosion to allowable levels. The standards also require revegetation and slope stabilization to prevent erosion of slopes.

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 substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒

Less than Significant Impact (i,ii).

The Project Area is not located in an earthquake, fault, liquefaction, or landslide zone, as defined by the State Department of Conservation and California Geological Survey or within an Alquist-Priolo Earthquake fault zone (DOC 2022c; DOC 2025a). No active or potentially active faults are known to pass directly beneath the Project Area. The project would not place structures or dwellings within a fault line or fault zone mapped area. Although there are no active faults in the City, there are several faults located within the Sierra Foothills east of the City and the City is located in a high seismic hazard area defined by USGS (USGS 2018). According to the California Geological Survey (CGS) Earthquake Shaking Potential for California mapping, the Project Area is located in an area with severe shaking potential, which falls in the middle of shaking potential scale for California. The lowest possible intensity level for California is "strong shaking" (CGS 2025). As mentioned previously, the only known active fault in Butte County is the Cleveland Hills Fault south of Oroville, approximately 27 miles southeast of the Project Area. The nearest fault to the Project Area is the "potentially active" late Quaternary Monocline Fault, which is located approximately 2.60 miles east of the Project Area (DOC 2022c; City of Chico 2010).

The Project Site may be subject to ground shaking in the event of an earthquake originating along one of the faults designated as active or potentially active in the general Project vicinity. This hazard is common throughout California. The proposed development within the Project Area would pose no greater risk to public safety or destruction of property than is already present for the region. The Proposed Project does not include structures that would be inhabited by people, and the Project Area would not be populated, other than personnel occasionally servicing the manhole. Impacts related to ground shaking or rupture of a fault would be less than significant.

No Impact (iii).

The Project Area is not located in a liquefaction zone, as defined by the State Department of Conservation and California Geological Survey (DOC 2025a). Even if seismic-related ground failure or liquefaction were to occur, the Proposed Project does not include habitable structures that would lead to loss or injury in the event of a seismic event. Once operational, the Project Area would not be accessible to the general public other than personnel occasionally servicing the manhole. No impact would occur.

No Impact (iv).

The Project Area and vicinity is relatively flat. Due to the lack of significant slopes, the Proposed Project is not likely to result in or be affected by on- or off-site landslides. Additionally, the

Project Area is not located in a landslide zone, as defined by the State Department of Conservation and California Geological Survey (DOC 2025a). 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 substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

Construction of the Proposed Project would involve grading and earth moving activities, as well as construction of project components. As described in Section 2.2, a trench would be dug to install the storm drain line and the proposed access road would be graded and surfaced with crushed rock along the length of the route. Construction would result in the temporary disturbance of soil and would expose disturbed areas to potential storm events, which could generate accelerated runoff, localized erosion, and sedimentation. Construction activities could exacerbate soil erosion and result in the loss of topsoil; this is a potentially significant impact. Implementation of Mitigation Measure HYD-1 would require construction activities to employ erosion and sediment control Best Management Practices (BMP). This includes limiting ground disturbance areas, restoring disturbed areas to pre-construction contours, erosion control measures, and revegetation, as necessary. Implementation of Mitigation Measure HYD-1 would ensure that potential impacts resulting from soil erosion or the loss of topsoil would be reduced to a less-than-significant level.

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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less than Significant Impact.

The Project Area contains soils that are somewhat poorly drained and the groundwater table may be relatively low in some areas, which could lead to a higher risk of liquefaction. However, no habitable structures are proposed to be built that could be affected by the Proposed Project and the Project Area is not accessible to the general public. The Project Area and vicinity is relatively flat and not susceptible to landslides. Additionally, the Project Area is not located in a liquefaction or landslide zone, as defined by the State Department of Conservation and California Geological Survey (DOC 2025a). Impacts 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?	☐	☐	☒	☐

Less than significant Impact.

Expansive soils can shrink and swell with drying and wetting. The shrink-swell potential of expansive soils can result in differential movement beneath foundations. Soils within the Project Area have a low to moderate shrink-swell potential. The storm drain line and sewer infrastructure would be upgraded and/or installed in compliance with City standards and design criteria. Therefore, infrastructure would be designed specifically to withstand potential unstable or expansive soils. However, no habitable structures are proposed to be built that could be affected by expansive soils, posing a risk to life or property and the Project Area is not accessible to the general public. Impacts 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?	☐	☐	☐	☒

No Impact.

The Proposed Project does not involve the construction or use of septic tanks or alternative wastewater disposal systems. No impact would occur.

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

Less than Significant Impact with Mitigation Incorporated.

The Project proposes ground-disturbing activities in previously disturbed areas. Therefore, the likelihood of encountering in-tact paleontological resources is lower. As described in Section 4.5.1.3, no paleontological resources were observed within the Project Area. However, there is always the potential, however remote, that previously unknown unique paleontological resources or sites could be encountered during subsurface construction activities. This is a potentially significant impact. In the

event that paleontological resources or sites are found, Mitigation Measure GEO-1 would ensure that the Proposed Project would not directly or indirectly destroy a unique paleontological resource. After implementation of Mitigation Measures GEO-1, impacts to paleontological resources would be less than significant.

4.7.3 Mitigation Measures

GEO-1: Discovery of Unanticipated Paleontological Resources.

If paleontological or other geologically sensitive resources are identified during any phase of Project development, the construction manager shall cease operation at the site of the discovery and immediately notify the City of Chico. City of Chico shall retain a qualified monitor trained in identifying paleontological resources 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, City of Chico 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 Area while mitigation for paleontological resources is carried out.

4.8 Greenhouse Gas Emissions

4.8.1 Environmental and Regulatory Setting

GHG emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as 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 more than 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO_2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Appendix G of the CEQA Guidelines' thresholds for GHG's do not prescribe specific methodologies for performing an assessment, do not establish specific thresholds of significance, and do not mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance consistent with the manner in which other impact areas are handled in CEQA. With respect to GHG emissions, the CEQA Guidelines § 15064.4(a) states that lead agencies "shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project's GHG emissions or rely on a "qualitative analysis or other performance-based standards." (14 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines § 15130(f)). As a note, the CEQA Guidelines were amended in response to Senate Bill (SB) 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The BCAQMD, the regional air pollution control officer for the basin, has not adopted a GHG significance threshold Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Thus, in the absence of any GHG emissions significance thresholds the projected emissions are compared to the GHG thresholds recommended by issued by the California Air Pollution Control Officers Association (CAPCOA), which is an association of air pollution control officers from all 35 local air quality agencies throughout California, including the BCAQMD. CAPCOA recommends a significance threshold of 900 metric tons annually. This threshold is based on a capture rate of 90 percent of land use development projects, which in turn translates into a 90 percent capture rate of all GHG emissions. The 900 metric ton threshold is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. The 900 metric tons of CO_2e per year value is typically used in defining small projects that are considered less than significant because it represents less than one percent of future 2050 statewide GHG

emissions target and the lead agency can provide more efficient implementation of CEQA by focusing its scarce resources on the top 90 percent. Land use projects above the 900 metric tons of CO_2e per year level would fall within the percentage of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources.

Additionally, the Project will be assessed for consistency with the City of Chico Climate Action Plan (CAP), adopted in 2021, which provides reduction strategies with the goal of reducing emissions 45 percent below 1990 levels by 2030 and achieve carbon neutrality by 2045.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Less than Significant Impact.

Where GHG emission quantification was required, emissions were modeled using CalEEMod version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with construction and operations from a variety of land use projects. Project construction generated GHG emissions were calculated using CalEEMod model defaults for Butte County. As the Project is proposing improvements to existing sewer and stormwater infrastructure, operational GHG emissions are discussed qualitatively. Refer to Appendix A for all CalEEMod output files.

4.8.2.1 Construction Greenhouse Gas Emissions

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Area, and off-road construction equipment (e.g., dozers, loaders, excavators). **Table 4.8-1** illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

Table 4.8-1. Construction-Related Greenhouse Gas Emissions	
Emission Source	**CO_2e (Metric Tons/Year)**
Construction – Calendar Year One	133
CAPCOA Significance Threshold	900
Exceed CAPCOA Significance Threshold?	No

Source: CalEEMod version 2022.1. Refer to Appendix A for Model Data Outputs.

As shown in Table 4.8-1, Project construction would result in the generation of approximately 133 metric tons of CO_2e. This would be less than the CAPCOA GHG significance threshold. Operational activities would be limited to routine maintenance, which would generate only minimal vehicle trips and negligible GHG emissions. This impact is less than significant.

4.8.2.2 Operational Greenhouse Gas Emissions

The Project proposes improvements to existing sewer and strormwater infrastructure, including the construction of a new storm drain line, upgrades to existing sewer infrastructure, construction of a new manhole, and construction of a new access road. The Project is designed to enhance system reliability and efficiency without creating any new permanent stationary sources of GHG emissions. Operational activities would be limited to routine maintenance, which would generate only minimal vehicle trips and negligible GHG emissions. The Proposed Project would not generate quantifiable GHG emissions from Project operations. Impacts 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 an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

No Impact.

The State of California promulgates several mandates and goals to reduce statewide GHG emissions, including SB 32 which aims to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 and 80 percent below 1990 levels by the year 2050 (Executive Order S-3-05). The Proposed Project is subject to compliance with SB 32. In addition, the City of Chico CAP establishes strategies to reduce community-wide emissions and achieve carbon neutrality by 2045. The Project would not generate quantifiable GHG emissions during Project operations and therefore would not conflict with SB 32 or any CAP strategies.

Additionally, as discussed previously, the Proposed Project-generated GHG emissions would not surpass the CAPCOA GHG significance threshold, which is the lowest adopted GHG threshold and was developed in consideration of statewide GHG reduction goals. Additionally, once construction is complete, the Project would not be a significant source of GHG emissions. The Project would not conflict with any adopted plans, policies, or regulations adopted for the purpose of reducing GHG emissions. There would be no impact.

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 and Regulatory 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, § 25501 as follows:

"Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

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

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

Under Government Code Section 65962.5, both the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. The Hazardous Waste and Substances Sites (Cortese) List is a planning tool used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. The Cortese list is prepared in accordance with California Government Code Section 65962.5. The DTSC EnviroStor and the SWRCB GeoTracker databases show no registered hazardous sites located within the Project Area (DTSC 2025; SWRCB 2025).

4.9.1.1 Federal Regulations

The principal federal regulatory agency responsible for the safe use and handling of hazardous materials is the US Environmental Protection Agency (USEPA), under the authority of the Resource Conservation and Recovery Act (RCRA). The USEPA regulates hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). Other applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the Code of Federal Regulations.

4.9.1.2 State Regulations

California regulations are equal to or more stringent than federal regulations. The USEPA has granted the State of California primary oversight responsibility to administer and enforce hazardous waste management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human health and the environment.

All hazardous materials are currently regulated and controlled by CalEPA in a manner that minimizes risks of spills or accidents. Any hazardous materials used in the construction, start-up, or operations of the Proposed Project, such as fuel for construction equipment, would be handled according to current best practices. The potential for construction and operation related impacts from hazardous materials are discussed below.

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

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

Construction of the Proposed Project would require site preparation activities, such as excavation at the proposed storm drain line and manhole locations and grading and recompaction of the proposed access road. During construction, oil, diesel fuel, gasoline, hydraulic fluid, and other liquid hazardous materials could be used. If spilled, these substances could pose a risk to the environment or human health. This is a potentially significant impact. Mitigation Measure HYD-1 and BIO-10 would require implementation of erosion and sedimentation BMPs, which address potential leaks and spills from vehicles and construction equipment. Furthermore, Mitigation Measure BIO-11 would require construction vehicle refueling to occur at least 150 feet from aquatic resources. Once constructed, the Proposed Project is not anticipated to cause a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. With implementation of Mitigation Measures HYD-1, BIO-10, BIO-11, and adherence to regulatory requirements, potential impacts associated with hazardous materials would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

Once constructed, the Proposed Project would not store hazardous materials on site. As discussed above, construction of the Proposed Project could potentially create a hazard to the public or the environment in the event of an accidental release of hazardous materials into the environment. This is a potentially significant impact. However, Mitigation Measures HYD-1, BIO-10, and BIO-11 would reduce impacts to less than significant.

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

No Impact.

There are no schools within a 0.25-mile of the Project Site. The nearest school is Oak Bridge Academy located off E Lassen Avenue in the city of Chico, approximately 1.0 mile southeast of the Project Area. Therefore, no impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

No Impact.

A query of the SWRCB's GeoTracker database and DTSC's EnviroStor indicate that there are no registered hazardous sites within the Project Area. The closest registered hazardous sites to the Project Area are located north of the Project Area within the current Chico Regional Airport property and are associated

with past industrial and military uses. Registered hazards on the airport property relate to underground fuel tanks, Victor Industries' manufacturing of lead and aluminum tubes and aerosol cans from 194 to 1958, and hazards associated with the former Chico Army Airfield from 1942 to 1945. There are no records or known occurrences of military-related hazards, such as unexploded ammunitions or explosives within the vicinity of the Project Area. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

The Project Area is located at the south end of the Chico Regional Airport, formerly known as the Chico Municipal Airport. The Project Area is identified within the Butte County Airport Land Use Compatibility Plan (ALUCP) of being located within portions of Zone A and Zone B1 (ALUCP 2017). Zone A encompasses existing and future runway extensions and Runway Protection Zones. Zone B1 covers an extended 5,000-foot radius from Zone A and the expanded forecast assumption.

The Proposed Project would include temporary construction noise. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. During construction, the Proposed Project would comply with Chapter 9.38, Section 9.38.060 of the City's Municipal Code, which regulates construction hours and limits allowable noise levels at sensitive receptor property lines. Due to the close proximity of the Proposed Project to the Chico Regional Airport's runway (approximately 620 feet southeast), lack of coordination with the airport staff could potentially result in safety hazards. Mitigation Measure HAZ-1 would require the City to coordinate with Chico Regional Airport staff, notifying them of construction timelines. With implementation of Mitigation Measures HAZ-1, impacts would be less than significant.

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

Less than Significant Impact.

Construction of the Proposed Project would require heavy equipment to be delivered to the Project Area via local roadways such as Highway 99. However, Project construction is temporary and would include a

relatively low quantity of daily hauling truck trips. It is not anticipated that the Proposed Project would result in significant traffic delays or physically interfere with the Butte County Local Hazard Mitigation Plan. Temporary signage would be placed where construction vehicles would enter and leave the public Right-of-Way (ROW) to notify the public of the approaching work zone and the potential for construction vehicles and controlled traffic conditions. The Proposed Project's construction activities would not significantly affect local streets or cause traffic congestion that could impact emergency response. The Project Area is not accessible to the general public and would not interfere with emergency response or evacuations once operational. Impacts would be less than significant.

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?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

The Project Area is located within a Moderate Fire Hazard Severity Zone within a Local Responsibility Area (LRA), as designated by the CAL FIRE Fire Hazard Severity Zone Map. A High Fire Hazard Severity Zone within a State Responsibility Area (SRA) borders the eastern boundary of the Project Area and a Very High Fire Hazard Severity Zone within a SRA is located approximately 1.3 miles east of the Project Area (CAL FIRE 2024). The risk of igniting a wildfire during construction is not likely, as construction would occur in a currently developed area. Furthermore, the Project Area does not involve unique slopes or other factors that would exacerbate wildfire risks. However, construction-related activities associated with the Proposed Project could involve the use of spark-producing construction equipment, which could temporarily increase the risk of igniting a fire within the Project Area. This is a potentially significant impact. To reduce the risk of wildland fires, Mitigation Measure HAZ-2 would be required to mitigate the potential to ignite fires during construction, such as requiring construction equipment to be equipped with a spark arrestor in good working order. Operation of the Proposed Project would not increase the risk of wildfire. Therefore, with implementation of Mitigation Measure HAZ-2, the Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and impacts would be less than significant.

4.9.3 Mitigation Measures

HAZ-1: Coordination with the Chico Regional Airport

The City must coordinate with Chico Regional Airport staff prior to construction activities and notify them of construction timelines.

HAZ-2: Use of a spark arrester in construction equipment and clearing of fire fuel near areas of development

During construction, staging areas, welding areas, or areas slated for development using spark-producing equipment shall be cleared of dried vegetation or other materials that could serve as fire fuel. To the extent feasible, the contractor shall keep these areas clear of combustible materials in order to maintain a fire break. Any construction equipment that normally includes a spark arrester shall be equipped with an arrester in good working order. This includes, but is not limited to, vehicles, heavy equipment, and chainsaws.

HYD-1: See *Section 4.10 Hydrology and Water Quality* for the full text of Mitigation Measure HYD-1.

BIO-10: See *Section 4.4 Biological Resources* for the full text of Mitigation Measure BIO-10.

BIO-11: See *Section 4.4 Biological Resources* for the full text of Mitigation Measure BIO-11.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Regional Hydrology

The City is located in the Sacramento River Hydrologic Region, which covers approximately 17.4 million acres (27,200 square miles) and extends south from the Modoc Plateau and Cascade Range at the Oregon border to the Sacramento-San Joaquin Delta. The Sacramento River Hydrologic Region is the main water supply for much of California's urban and agricultural area. The City is made up of the Big Chico Creek watershed and the Little Chico Creek/Butte Creek watersheds (City of Chico 2010). Sheep Hollow creek flows from east to west through the center of the Project Area. A Federal levee runs south and parallel to sheep Hollow Creek.

FEMA oversees the delineation of flood zones and the provision of federal disaster assistance. FEMA manages the National Flood Insurance Program and publishes the Flood Insurance Rate Maps (FIRM), that show the expected frequency and severity of flooding by area, typically for the existing land use and type of drainage/flood control facilities present. Portions of the Project Area that are adjacent to Sheep Hollow Creek are located within a FEMA designated 0.1 percent Annual Chance Flood Hazard Zone (100-year floodplain), which is characterized as a high-risk flood area (FEMA 2025).

4.10.1.2 Surface Water Quality

The City is located within the Central Valley Hydrologic Basin Planning Area under the jurisdiction of the Central Valley Regional Water Quality Control Board (CVRWQCB). The CVRWQCB's Basin Plan outlines the beneficial water uses that the California State Water Resources Control Board (State Water Board) will protect, water quality objectives, and strategies for achieving these objectives.

4.10.1.3 Groundwater

The City of Chico lies above the Sacramento Valley Groundwater Basin and the West Butte and Vina subbasins. The Tuscan aquifer is the primary groundwater reservoir underlying and providing municipal and agricultural water to the city of Chico. The groundwater supply is largely recharged by infiltration in the foothills located east of Chico, from Big Chico and Little Chico Creeks, Lindo Channel, and to a lesser extent from precipitation throughout the area (City of Chico 2010).

4.10.2 Regulatory Setting

4.10.2.1 Federal

Clean Water Act

The CWA (33 USC §§ 1251-1376), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Important sections of the Act are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines. Under Section 303(d) of the CWA, the USEPA publishes a list every two years of impaired bodies of water for which water quality objectives are not attained. Total Maximum Daily Loads (TMDL) are established for contaminants of concern in order to ensure contamination levels decrease over time.
- Section 401 (Water Quality Certification) requires an applicant for any federal permit that proposes an activity, which may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the Act.
- Section 402 establishes the NPDES, a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the SWRCB and is discussed in detail below.
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by USACE and the USEPA.

National Pollutant Discharge Elimination System

Under Section 402(p) of the CWA, the USEPA established the NPDES to enforce discharge standards from a variety of sources. Both point source and non-point-source pollution is covered under the NPDES. Dischargers in both categories can apply for individual discharge permits or apply for coverage under the General Permits that cover certain qualified dischargers. Point source discharges come from "any discernible, confined, and discrete conveyance," including municipal and industrial wastewater, stormwater runoff, combined sewer overflows, sanitary sewer overflows, and municipal separated storm sewer systems. NPDES permits impose limits on the pollutants discharged based on minimum performance standards or the quality of the receiving water, whichever type is more stringent in a given situation. The NPDES permits all involve similar processes, which include submitting notices of intent for discharging to water in areas under the Central Valley RWQCB's jurisdiction and implementing BMPs to minimize those discharges. The Central Valley RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the State**.**

4.10.2.2 State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) provides the basis for water quality regulation within California. The Act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the State. The RWQCB implements waste discharge requirements identified in the Report.

4.10.2.3 Local

Chico Storm Water Management Program (2004)

The Chico Storm Water Management Program is a comprehensive program to reduce storm water pollution and eliminate prohibited non-storm water discharges in accordance with federal and state laws and regulations. The Program was a requirement of Phase II of the National Pollutant Discharge Elimination System (NPDES) Program.

Chico Water Master Plan (2024)

The purpose of the Chico Storm Water Master Plan is to provide an updated plan that consolidates information from numerous documents, develops new and updated technical analyses, and provides a comprehensive resource to support future drainage system operations, planning, and development within the City and County. The Chico Water Master Plan notes drainage deficiencies that require improvements and provides a comprehensive report of the City's drainage systems (City of Chico, 2024).

City of Chico Municipal Code

City of Chico Municipal Code Chapter 15.50 governs stormwater management and discharge. The chapter prescribes regulations to prohibit non-stormwater discharges to the City's storm drain system and to reduce the discharge of pollutants. The regulations require applicants for development projects disturbing over 1 acre to file a Stormwater Pollution Prevention Plan (SWPPP) with the State to gain coverage of the activity under the City's Construction General Permit.

Chapter 16.22 of the City of Chico Municipal Code contains the City's grading standards. The standards specify that the maximum permanent rate of sediment loss after completion of a project should not exceed the natural erosion rate which occurred prior to the grading project. In addition, if excessive erosion occurs from the project, erosion and sediment control measures are required to be immediately implemented to reduce erosion to allowable levels. The standards also require revegetation and slope stabilization to prevent erosion of slopes.

City of Chico 2030 General Plan

The following goals and policies of the City 2030 General Plan are relevant to hydrology and water quality:

> *Policy PPFS-4.2 (Protection of Groundwater Resources): Protect the quality and quantity of groundwater resources, including those that serve existing private wells, from contamination by septic systems.*
>
> *Policy PPFS-5.1 (Protect Aquifer Resources): Protect the quality and capacity of the upper and lower Tuscan and Tehama aquifers underlying the Chico Planning Area.*
>
> *Policy PPFS 6.2 (Storm Water Drainage): Continue to implement a stormwater drainage system that results in no net increase in runoff.*

Policy PPFS-6.3 (Storm Water Drainage BMPs): To protect and improve water quality, require the use of Best Management Practices for stormwater drainage infrastructure suited to the location and development circumstances.

Policy PPFS-6.4 (Water Runoff): Protect the quality and quantity of water runoff that enters surface waters and recharges the aquifer.

Goal OS-3 Conserve water resources and improve water quality.

Policy OS-3.1 (Surface Water Resources): Protect and improve the quality of surface water.

Policy OS-3.2 (Protect Groundwater): Protect groundwater and aquifer recharge areas to maintain groundwater supply and quality

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

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

Construction of the Proposed Project could potentially violate water quality standards or waste discharge requirements, as construction equipment and materials have the potential to result in accidental discharge of pollutants into water resources. This would be a potentially significant impact. Potential pollutants include particulate matter, sediment, oils and greases, concrete, and adhesives. Mitigation Measure HYD-1 would require construction activities to employ erosion and sediment control BMPs and/or obtain coverage under the NPDES Construction General Permit for construction activities, as necessary. Once operational, the Proposed Project would not generate potential pollutants that could affect water quality. With implementation of Mitigation Measure HYD-1, impacts related to water quality standards would be less than significant.

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

No Impact.

The Proposed Project would not require groundwater supplies. The Proposed project would not introduce new impervious surfaces that would impede groundwater recharge. No impact to groundwater resources would occur.

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

Less than Significant Impact with Mitigation Incorporated.

The Proposed Project would not substantially alter the existing drainage pattern of the Project Area, as no major grading is proposed and the Project Area would remain relatively flat. As the proposed access road would be constructed of crushed gravel, the Proposed Project would not introduce additional impervious surfaces that would substantially increase the rate of surface runoff. No structures are proposed which would impede or redirect flood flows. However, construction of the Proposed Project has the potential to result in erosion, siltation, temporary changes to drainage patterns, and contamination of stormwater. This would be a potentially significant impact. Mitigation Measure HYD-1 would require construction activities to employ erosion and sediment control BMPs and/or obtain coverage under the NPDES Construction General Permit for construction activities, as necessary. This would include implementation of BMPs during construction to reduce the potential for impacts associated with erosion and exceeding water quality thresholds. Implementation of BMPs such as fiber rolls, hay bales, and silt fencing, would reduce the potential for sediment and stormwater runoff containing pollutants from entering receiving waters, especially Sheep Hollow Creek within the Project Area. With implementation of Mitigation Measure HYD-1, impacts related to erosion and polluted runoff would be less than significant.

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

Less than Significant Impact.

Portions of the Project Area that are adjacent to Sheep Hollow Creek are located within a FEMA designated 0.1 percent Annual Chance Flood Hazard Zone (100-year floodplain), which is characterized as a high-risk flood area (FEMA 2025). If flood waters were to inundate the Project Area, there would be a low risk that pollutants would be released, because the Proposed Project equipment and activities are not expected to store or generate large quantities of chemicals and pollutants. Additionally, the Proposed Project would be constructed during the summer months when rain and flooding is unlikely. Therefore, 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
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

As mentioned above, construction of the Proposed Project could potentially violate water quality standards or waste discharge requirements, as construction equipment and materials have the potential to result in accidental discharge of pollutants into water resources. This would be a potentially significant impact. Mitigation Measure HYD-1 would require construction activities to employ erosion and sediment control BMPs and/or obtain coverage under the NPDES Construction General Permit for construction activities, as necessary. Furthermore, the Proposed Project would not use groundwater supplies or obstruct groundwater recharge. The Proposed Project would not conflict or obstruct the CVRWQCB Basin Plan. With implementation of Mitigation Measure HYD 1, Impacts would be less than significant.

4.10.4 Mitigation Measures

HYD-1: Erosion and Sediment Control BMPs

If it's determined that the Proposed Project requires coverage under the NPDES Construction General Permit, the Applicant shall obtain coverage prior to initiation of construction activities. The SWRCB requires that construction sites have adequate control measures to reduce the discharge of sediment and other pollutants to streams to ensure compliance with Section 303 of the CWA. To comply with the NPDES permit, a Notice of Intent shall be filed with the SWRCB and a SWPPP shall be approved prior to construction. The SWPPP shall include a detailed, site-specific listing of the potential sources of stormwater pollution; pollution prevention measures (erosion and sediment control measures and

measures to control non-stormwater discharges and hazardous spills) including a description of the type and location of erosion and sediment control BMPs to be implemented at the Project Sites; and a BMP monitoring and maintenance schedule to determine the amount of pollutants leaving the Project Site. A copy of the SWPPP shall be kept on the Project Site.

If it's determined that coverage under the NPDES Construction General Permit is not required, the following water quality BMPs recommended by the Construction General Permit shall nonetheless be employed:

- Areas where ground disturbance occurs shall be identified in advance of construction and limited to approved areas.
- Vehicular construction traffic shall be confined to the designated access routes and staging areas.
- Equipment maintenance and cleaning shall be confined to staging areas. No vehicle maintenance shall occur on-site during construction.
- Disturbed areas shall be restored to pre-construction contours to the extent possible.
- Hay/straw bales and silt fences shall be used to control erosion during stormwater runoff events.
- The highest quality soil shall be salvaged, stored, and used for native re-vegetation/seeding.
- Drainage gaps shall be implemented in topsoil and spoil piles to accommodate/reduce surface water runoff.
- Sediment control measures shall be in place prior to the onset of the rainy season and will be maintained until disturbed areas have been re-vegetated. Erosion control structures shall be in place and operational at the end of each day if work activities occur during the rainy season.
- Fiber rolls shall be placed along the perimeter of disturbed areas to ensure sediment and other potential contaminants of concern are not transported off-site or to open trenches. Locations of fiber rolls will be field adjusted as needed.
- Vehicles and equipment stored in the construction staging area shall be inspected regularly for signs of leakage. Leak-prone equipment will be staged over an impervious surface or other suitable means will be provided to ensure containment of any leaks. Vehicle/equipment wash waters or solvents will not be discharged to surface waters or drainage areas.
- During the rainy season, soil stockpiles and material stockpiles will be covered and protected from the wind and precipitation. Plastic sheeting will be used to cover the stockpiles and straw wattles will be placed at the base for perimeter control.
- Contractors shall immediately control the source of any leak and immediately contain any spill utilizing appropriate spill containment and countermeasures. Leaks and spills shall be reported to the designated representative of the lead contractor. Contaminated media shall be collected and disposed of at an off-site facility approved to accept such media.

4.11 Land Use and Planning

4.11.1 Environmental Setting

The Project Area is located within the City of Chico 2030 General Plan land use designation, Public Facilities & Services (PFS) (City of Chico 2017). The zoning designation is Airport Public Facilities (AP) (City of Chico 2017; 2025). Project parcels associated with the Project Area are owned by the City.

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

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

No Impact.

Projects that have the potential to physically divide an established community typically include new freeways and highways, major arterials streets, and railroad lines. The Proposed Project would not physically divide an established community. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

No Impact.

The Proposed Project includes the replacement and installation of sanitary sewer and storm drain infrastructure to improve system efficiency. The Proposed Project is consistent with the City of Chico 2030 General Plan land use designation Public Facilities & Services (PFS) and Airport Public Facilities (AP) zoning standards. No impact would occur.

4.11.3 Mitigation Measures

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

4.12 Mineral Resources

4.12.1 Environmental Setting

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

- MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.
- MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4: Areas where available information is inadequate for assignment into any other MRZ.

There are no active mines and no known areas with mineral resource deposits within the City of Chico, although historically several areas along Butte Creek were mined for gold, sand, and gravel. However, public or private entities can petition the State Mining and Geology Board to classify specific lands that contain significant mineral deposits and that are threatened by land use incompatibilities (City of Chico 2010).

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

No Impact.

There are no active mines and no known areas with mineral resource deposits within the Project Area. 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 the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

No Impact.

The City of Chico 2030 General Plan Environmental Impact Report (EIR) states that there are no active mines and no known areas with mineral resource deposits within the Project Area (City of Chico 2010). Additionally, the Project Area is not identified as a mineral resource recovery site. Therefore, no impact would occur.

4.12.3 Mitigation Measures

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

4.13 Noise

4.13.1 Environmental Setting

4.13.1.1 Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

- **Equivalent Noise Level (L_{eq})** is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- **Day-Night Average (L_{dn})** is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.
- **Community Noise Equivalent Level (CNEL)** is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

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

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed (FHWA 2011).

The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (Harris Miller Miller & Hanson Inc. 2006).

Human Response to Noise

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

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

- Except in carefully controlled laboratory experiments, a change of 1.0 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3.0-dBA change is considered a just-perceivable difference.
- A change in level of at least 5.0 dBA is required before any noticeable change in community response would be expected. An increase of 5.0 dBA is typically considered substantial.
- A 10.0-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Sensitive Noise Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. According to the City of Chico General 2030 Plan Noise Element, noise-sensitive uses include residences, nursing homes, day care centers, hospitals, schools, parks, and places of assembly, such as theaters, churches and meeting halls. Residential dwellings are of primary concern because of the impacts associated with exposure of individuals to potentially high interior and exterior noise levels.

The Project is proposing improvements to existing sewer and storm drain infrastructure. The nearest noise sensitive receptors to the Project Area are residences fronting Vispera Drive approximately 0.30 mile (1,569 feet) east of the Project Area.

4.13.1.2 Vibration Sources and Characteristics

Ground vibration can be measured several ways to quantify the amplitude of vibration produced, including through peak particle velocity (PPV) or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively. Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.13.1.3 Existing Noise Environment

The Project Area is located directly southeast of the Chico Regional Airport runway. According to Figure N-2, Noise Contour Map, of the City's General Plan Noise Element, the Project Area is located within the 60 dBA CNEL and 65 dBA CNEL noise contours. Another source of noise in the Project Area would be vehicle traffic on Cohasset Road located east of the Project Area.

4.13.2 Noise (XIII) Environmental Checklist and Discussion

Would the Project result in	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Less than Significant Impact.

4.13.2.1 Project Construction Noise

Construction noise associated with the Proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., site preparation and excavation). Noise generated by construction equipment, including earth movers, pile drivers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest sensitive receptors to the Project Area are residences along Vispera Drive, approximately 0.30 mile east of the Project Area. During construction, the Project must comply with Chapter 9.38, Section 9.38.060 of the City's Municipal Code, which regulates construction hours and limits allowable noise levels at sensitive receptor property lines. Compliance with these regulations would ensure construction noise impacts remain less than significant.

4.13.2.2 Project Operational Noise

As previously described, the Project is proposing improvements to existing sewer infrastructure. Once construction is complete, operational noise levels would remain unchanged, limited to routine maintenance activities which currently take place. As such, 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 generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☐	☒

No Impact.

4.13.2.3 Project Construction Vibration

Construction Vibration Analysis

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the Project would be primarily associated with short-term, construction-related activities. Construction within the Project Area 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 as the distance from the source increases.

Construction-related ground vibration is normally associated with impact equipment, such as pile drivers and jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance and construction activities would occur throughout the Project Area and would not be concentrated at the point closest to sensitive receptors. **Table 4.13-1** summarizes groundborne vibration levels associated with typical construction equipment.

Table 4.13-1. Representative Vibration Source Levels for Construction Equipment	
Equipment Type	**Peak Particle Velocity at 25 Feet (inches per second)**
Large Bulldozer	0.089
Pile Driver	0.170
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: FTA 2018

The City of Chico does not regulate vibration associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020) recommended standard of 0.3 inches per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings.

The nearest offsite structure of concern to the construction site, with regard to groundborne vibrations, is an industrial building located east of Cohasset Road, approximately 90 feet east of the Project Area. As shown in Table 4.13-1, vibration levels would not exceed the recommended 0.3 inches per second PPV at 25 feet. At 90 feet, vibration levels would be even lower, ensuring no impact on the structure. Therefore, no impact would occur.

Project Operational Vibration

Project operations would not include the use of any large-scale, stationary equipment that would result in excessive vibration levels; therefore, the Proposed Project would not result in ground-borne vibration impacts during operations. No impact would occur.

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?	☐	☐	☐	☒

No Impact.

The Project Area is located directly south of the Chico Regional Airport. According to Figure N-2, Noise Contour Map, of the City's 2030 General Plan Noise Element, the Project Area is located within the 60 dBA CNEL and 65 dBA CNEL noise contours. The Proposed Project would not expose people working on the Project Area to excess airport noise levels. No impact would occur.

4.13.3 Mitigation Measures

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

4.14 Population and Housing

4.14.1 Environmental Setting

According to the U.S. Census Bureau, (U.S. Census Bureau 2024), which provides estimated population and housing unit demographics by year throughout the state, the estimated population for the City of Chico was 102,907 in 2024 with an estimated 49,392 housing units. No housing exists in the Project Area and none is planned.

4.14.2 Population and Housing (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

No Impact.

The Proposed Project does not include the construction of any new homes, the extension of roads, or installation of new public infrastructure. Therefore, direct or indirect increase of population growth would not occur as a result of the Proposed Project. No impact would occur.

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

No Impact.

No persons or residences would be displaced or removed as a result of the Proposed Project. No impact would occur.

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 residential development. Levels of service are generally based on a service-to-population ratio, except for fire protection, which is usually based on response time.

4.15.1.1 Police Services

The Chico Police Department (Police) provides law enforcement services within the city limits, including the Project Area. The Chico Police Department is located approximately 3.88 miles southeast of the Project Area.

4.15.1.2 Fire Services

The Project Area is serviced by the Chico Fire Department. Chico Fire Department maintains an automatic aid agreement with the Butte County Fire Department and CAL FIRE. The Chico Fire Department operates out of four stations; a fifth station is unstaffed at the Chico Municipal Airport. The Chico Fire Department has approximately 60 full-time personnel and eight Volunteer Firefighters (City of Chico 2023). The nearest fire station to the Project Area is Station 5, approximately 2.73 miles southeast of the Project Area at 1777 Manzanita Avenue.

4.15.1.3 Schools

Chico Unified School District (CUSD) serves the City of Chico and surrounding area with public school services providing a full range of K-12 education services. CUSD is comprised of 23 schools: 12 Elementary, three Junior High, two High School, one Continuation, one Community Day School,; one Opportunity, one Independent Study, one Special Services, one Online Learning Academy, and four Preschool Programs. CUSD enrolls approximately 12,000 students (CUSD, 2023). The nearest school to the Project Area is Oak Bridge Academy, approximately 0.70 mile south of the Project Area.

4.15.1.4 Parks

The City of Chico and the Chico Area Recreational & Park District (CARD) manage community and neighborhood parks within the City of Chico. No public parks are adjacent or near the Project Area. The closest public park is Hancock Park located at Middletown Avenue and Valley Forge Drive in Chico, approximately 2.9 miles southeast of the Project Area.

4.15.2 Public Services (XV) Environmental Checklist and Discussion

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

No Impact.

The Proposed Project would not introduce housing or residents that could lead to an increase demand for public services and would not lead to unanticipated growth or expanded facilities or affect the performance objectives of public facilities. All improvements from the Project would be maintained by the City of Chico and would not require fire or police protection beyond existing conditions. No impact would occur.

4.15.3 Mitigation Measures

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

4.16 Recreation

4.16.1 Environmental Setting

The City of Chico and the Chico Area Recreational & Park District (CARD) manage community and neighborhood parks within the City of Chico. No public parks are adjacent or near the Project Area. The closest public park is Hancock Park located at Middletown Avenue and Valley Forge Drive in Chico, approximately 2.9 miles southeast of the Project Area.

4.16.2 Recreation (XVI) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒

No Impact.

The Proposed Project would not directly impact any parks or recreation facilities. The closest recreational area to the Project Area is the Westside Little League Complex located at 1550 Marauder Street in Chico, which is approximately 2 miles north of the Project Area. The Proposed Project would not increase the use of any existing recreational areas, nor would it require the construction of new recreational facilities. Therefore, the Project would have no impact.

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

No Impact.

The Proposed Project does not involve recreational facilities or require the construction or expansion of recreational facilities. No impact would occur.

4.16.3 Mitigation Measures

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

4.17 Transportation

4.17.1 Environmental Setting

4.17.1.1 Roadway System

Roadway classifications for each roadway segment in the vicinity of the Project Area are described in more detail below.

Freeways

Freeways serve regional, inter-city travel and should not become the optimum route for intra-city trips. Access is controlled, grade crossings are separated, and medians separate lanes moving in opposite directions (City of Chico 2017). The City of Chico is not served by an interstate freeway. The regional freeway in the City includes State Route (SR)-99. SR-99 serves as a north-south route connecting to Yuba County to the south and the City of Red Bluff to the north. SR-99 is approximately 2.0 miles west of the Project Area.

Expressways

Expressways are designed to carry heavy traffic volumes at speeds of 40-55 miles per hour. Expressways should serve longer distance intra-city travel as well as link the City with other nearby urban areas. Access is limited, crossings are generally signalized at grade, parking is prohibited, and a continuous median separate lanes in opposite directions.

Arterials

The primary function of an arterial is to move large volumes of traffic between freeways and other arterials. Arterials generally provide four travel lanes, but may have fewer lanes. On street parking may be provided. Driveway access should be minimized, consistent with the primary function of arterials to move through traffic. Bike lanes, medians, park strips, sidewalks, and transit facilities are also accommodated within the right-of-way. Cohasset Road would serve as the main access road to the Project Area and is classified as a four-lane arterial. In 2023, a road widening project of Cohasset Road was completed, widening the arterial from two to four lanes.

Collectors

Collector streets provide a link between local streets and arterials. Collectors provide two travel lanes. On-street parking is generally permitted. Driveway access is allowed, but should be minimized. Bike lanes, park strips, sidewalks, and transit facilities are also typically accommodated within the right-of-way.

Local Streets

The primary function of local streets is to provide direct access to adjacent properties. Local streets normally provide two travel lanes, landscaped park strips, sidewalks, and on-street parking. Bike lanes are not included because local streets have narrow street widths, carry low traffic volumes, and are considered to be bicycle-friendly. No local streets are located within the Project Area. Thorntree Drive and Two Oaks Drive are local streets providing access to manufacturing businesses, located on the eastern side of Cohasset Road approximately 0.4 miles east of the Project Area.

4.17.1.2 Bicycle Facilities

Bicycle facilities in the City of Chico include Class I Bicycle Paths, Class II Bicycle Lanes, and Class III Bicycle Routes. Class I Bicycle Paths provide a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal interruption by motorists. Class II Bicycle Lanes provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross flows by pedestrians and motorists permitted. Class III Bicycle Routes provide designated areas where bicycles share the road with other modes of travel (such as vehicles).

A Class I Bike Path, known as the Airport Bike Path, is located adjacent to the eastern boundary of the Project Area. The Airport Bike Path is a paved mixed-use path that traverses 3.25 miles from the Chico Regional Airport to the intersection of Lindo Channel and Esplanade. Near the Project Area, the Bike Path runs adjacent to Cohasset Road but is physically separated from the roadway through segments of a roadside swale, landscaping strip, and concrete barrier.

4.17.1.3 Pedestrian Facilities

Pedestrian facilities in the City are comprised primarily of pathways, sidewalks, trails, bridges, and pedestrian crossings. The Airport Bike Path is the nearest pedestrian facility as it serves as a mixed-use path along Cohasset Road.

4.17.2 Transportation (XVII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	☐	☐	☐	☒

No Impact.

The Proposed Project is not considered a trip generating project. Operation of the Proposed Project is not anticipated to increase traffic. While periodic maintenance of sewer and storm drain infrastructure would be required, maintenance activities would result in a negligible increase in additional traffic. The Proposed Project includes the construction of an approximately 342-foot access road off Cohasset Road to access the proposed manhole. However, this road would dead end at the manhole and would not be accessible to the general public. The Proposed Project would not include any changes to the City's circulation system including transit, roadways, bicycle, and pedestrian facilities that would conflict with a program, plan, ordinance, or policy. No impact would occur.

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

No Impact.

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

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

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

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

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

The Proposed Project would result in a short-term increase in the amount of traffic on the arterial roadway, Cohasset Road, during construction. Following completion of the Project there would be no increase in traffic beyond current conditions. The Project does not propose any new commercial, industrial, residential or other development that would increase traffic trips in the area and would not exceed the threshold for significant impacts related to traffic. Therefore, no impact would occur.

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

No Impact.

The Proposed Project includes the construction of an approximately 342-foot access road off Cohasset Road to access the proposed manhole. However, this road would dead end at the manhole and would not be used by the public. The roadway would be designed to City standards and would include hazardous design elements. No impact would occur.

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

Less than Significant Impact.

Construction of the Proposed Project would require heavy equipment to be delivered to the Project Area via local roadways such as Highway 99. However, Project construction is temporary and would include a relatively low quantity of daily hauling truck trips. It is not anticipated that the Proposed Project would result in significant traffic delays or interfere with emergency access. The Project Area is not accessible to the general public and would not interfere with emergency response or evacuations once operational. Impacts would be less than significant.

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

4.18.1.1 Ethnohistory

The Konkow, or Northwestern Maidu, occupied the Northern Sacramento Valley and the surrounding foothills of the Sierra Nevada range. The Maidu have been differentiated into three major related divisions based on cultural and linguistic differences: the Northeastern (Mountain Maidu), Northwestern (Konkow), and Southern (Nisenan) (Dixon 1905; Kroeber 1925).

Powers (1877), Dixon (1905), and Kroeber (1925) have provided the earliest documentation of the Maidu and Konkow, and their thorough observations have depicted the life and culture of these related groups. Additional ethnographic descriptions for the Maidu and Konkow can be found in Riddell (1978), Hill (1970), and Kowta (1988), among others. An in-depth description of Maiduan material culture and resource exploitation has been included in Johnson and Theodoratus (1978). Because Maidu and Konkow are believed to have been so closely related, ethnographers tended to group them as one.

Konkow occupied territory immediately 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 (Riddell 1978). 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 (Heizer 1978).

The settlement patterns of the Maidu and Konkow were seasonal. Konkow inhabited a savanna-like habitat on the valley floor and in the lower elevations of the Sierra foothills during the winters. Resources exploited in this environment include wild rye, pine nuts, acorns, fish, and invertebrates (Kroeber 1925; Riddell 1978). Summers in the mountains gave them access to deer meat, skins, and other items for food, clothing, and shelter for the winter months.

The village community, the primary settlement type among the Maidu-Konkow, consisted of three to five small villages, each composed of about 35 members. Among the mountain Maidu, village communities were well defined and based on geography. In contrast, the Konkow were dispersed throughout the valley floor along river canyons, and as a result, village communities were less concentrated or definable (Kroeber 1925). 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 (Dixon 1905; Riddell 1978; Riddell and Pritchard 1971). 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 (Dixon 1905; Kroeber 1925; Riddell 1978). Two other types of ethnographically documented structures in use included the winter-occupied conical bark structure and the summer shade shelter (Riddell 1978).

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 (Riddell 1978). Shell, in the form of beads for currency or as valuable jewelry, was very desirable and was exchanged for food, obsidian, tobacco, and pigments (Kroeber 1925; Riddell 1978).

4.18.2 Regulatory Setting

4.18.2.1 Assembly Bill 52

Effective July 1, 2015, AB 52 amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the PRC defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the PRC defines TCRs for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or
    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
    c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a. and b. meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as a Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

4.18.3 Tribal Coordination

AB 52 consultation requirements went into effect on July 1, 2015 for all projects that have not already published a Notice of Intent to Adopt a Negative Declaration or MND or published a Notice of Preparation of an EIR (Section 11 [c]). No Tribes have requested to be put on the City's AB 52 notification list as of the date of preparation of this IS/MND; therefore, AB 52 consultation letters are not required. However, the City, in accordance with the *Memorandum of Understanding Regarding Guiding Principles for the City of Chico Consultation with the Mechoopda Indian Tribe of Chico Rancheria* (August 5, 2008) informs the Tribe of capital construction projects within the City and routinely solicits early review and input of environmental documents. Therefore, on November 25, 2025, the City of Chico sent a Project notification letter to the Mechoopda Indian Tribe providing an early opportunity to submit comments on any known resources in the area. No response has been received as of the date of preparation of this IS/MND.

4.18.4 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

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

Less than Significant Impact with Mitigation Incorporated (i,ii).

As conveyed in the Cultural Resources Inventory Report conducted by ECORP Consulting, Inc., no known tribal cultural resource was identified in the Project Area or within a 0.5-mile radius during the records

search and literature review performed. The Project Area has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. However, unanticipated, and accidental discovery of California Native American TCRs 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.

4.18.5 Mitigation Measures

CUL-1: See *Section 4.5 Cultural Resources* for the full text of Mitigation Measure CUL-1.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

Within the City of Chico, water services are provided to residential, industrial, and commercial customers by the California Water Service Company (Cal Water). The Cal Water Chico District was formed in 1926 and provides water services utilizing 68 wells to pump an average of 27 million gallons of groundwater per day (Cal Water). The delivery system is composed of over 373 miles of pipeline, eight storage tanks, and nine booster pumps. Outside of the establishments listed previously, water needs are met through individual groundwater wells or small water systems (Cal Water 2025).

4.19.1.2 Wastewater

Wastewater in the City of Chico is treated at the City of Chico Water Pollution Control Plant (WPCP) located southwest of the City off Chico River Road. The WPCP is a regional-serving, gravity-fed facility providing treatment of the City's wastewater and discharging treated effluent to the Sacramento River. The Plant operates under strict waste discharge requirements permitted by the California Water Resource Control Board. The City's former wastewater treatment plant and effluent pond is located within the Project Area and vicinity. The former wastewater treatment plant has suspended all operations, and all wastewater is treated at the WPCP located off Chico River Road.

4.19.1.3 Storm Drainage

Storm drainage management within the City is provided by a system of developed and undeveloped collection systems operated and maintained by the City and Butte County. The developed storm drainage system consists primarily of drop inlets located along the street system. Water in the system is transported to outfall locations located along the major creeks including Sycamore, Mud, Comanche, Big Chico, and Little Chico Creeks and Lindo Channel (City of Chico 2017).

Existing storm drainage infrastructure within the Project Area currently discharges stormwater into the existing unnamed drainage channel west of the Project Area that empties into the nearby waterway, Sheep Hollow Creek, which connects to Sycamore Creek.

4.19.1.4 Solid Waste

Residential and commercial solid waste and recycling services are provided by two waste hauling companies, North Valley Waste Management and Recology. Solid waste and generated in the City is disposed of at the Neal Road Landfill, which is operated and owned by Butte County. Green yard waste is hauled to the City's Compost Facility, located north of the Project Area.

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

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Less than significant Impact.

The Proposed Project involves the installation of a new storm drain diversion line, the replacement of sanitary sewer pipe maintenance infrastructure, and the construction of a new manhole and access road. The Proposed Project would improve system efficiency of the City's sanitary sewer and storm water drainage systems but would not expand these systems. Potential impacts relating to upgrades of these utilities are accessed throughout this Initial Study and where appropriate, mitigation measures have been introduced to reduce potentially significant impacts to less than significant. The Proposed Project would not require new or expanded electrical power, natural gas, or telecommunications facilities. Therefore, impacts associated with the construction or relocation of utilities would be less than significant.

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

No Impact.

The Proposed Project would not require water supplies once operational. Construction of the Proposed Project would require minimal amounts of water for activities such as washing aggregates, dust suppression, and washing surfaces. However, water would be limited during the construction phase and quantities are not anticipated to be significant. A portable water supply would be utilized for project activities (e.g. for dust control and for workers) and no new demand for water supplies would be required. No impact would occur.

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

No Impact.

The Proposed Project would improve sanitary sewer and storm water drainage systems and would not increase the demand of wastewater services. Therefore, there would be no impact.

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 Impact.

Construction activities associated with the Proposed Project are not expected to generate substantial amounts of solid waste. The existing storm drainage pipes would be abandoned in place and would not need to be recycled or disposed of. Solid waste would only be generated as a result of grubbing, and/or trenching for new storm drainage pipe installation. The minimal amount of solid waste generated would be considered insignificant and would not exceed the capacity at the Neal Road Landfill and would not impair the attainment of solid waste reduction goals. No 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?	☐	☐	☐	☒

No Impact.

Waste generated by the Proposed Project would comply with all applicable federal, state, and local statutes and regulations related to solid waste. No impact would occur.

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.

Chico has the potential for both urban structural fires and wildland fires. Upper Bidwell Park and the foothills on the eastern edge of the community are particularly prone to wildland fire and are designated within a Very High or High Fire Severity Zone. The Project Area is located within a Moderate Fire Hazard Severity Zone within a LRA, as designated by the CAL FIRE Fire Hazard Severity Zone Map. A High Fire Hazard Severity Zone within a SRA borders the eastern boundary of the Project Area and a Very High Fire Hazard Severity Zone within a SRA is located approximately 1.3 miles east of the Project Area (CAL FIRE 2024).

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?	☐	☐	☒	☐

Less than significant.

The Project Area is located within a Moderate Fire Hazard Severity Zone within a LRA, as designated by the CAL FIRE Fire Hazard Severity Zone Map. A High Fire Hazard Severity Zone within a SRA borders the eastern boundary of the Project Area and a Very High Fire Hazard Severity Zone within a SRA is located approximately 1.3 miles east of the Project Area (CAL FIRE 2024). Construction of the Proposed Project would require heavy equipment to be delivered to the Project Area via local roadways such as Highway 99. However, Project construction is temporary and would include a relatively low quantity of daily hauling truck trips. It is not anticipated that the Proposed Project would result in significant traffic delays that could potentially impair an adopted emergency response or evacuation plan. Temporary signage would be placed where construction vehicles would enter and leave the public Right-of-Way (ROW) to notify the public of the approaching work zone and the potential for construction vehicles and controlled traffic conditions. Impacts would be less than significant.

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?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

The Project Area is located within a Moderate Fire Hazard Severity Zone within a LRA, as designated by the CAL FIRE Fire Hazard Severity Zone Map. A High Fire Hazard Severity Zone within a SRA borders the eastern boundary of the Project Area and a Very High Fire Hazard Severity Zone within a SRA is located approximately 1.3 miles east of the Project Area (CAL FIRE 2024). The risk of igniting a wildfire during construction is not likely, as construction would occur in a currently developed area. Furthermore, the Project Area does not involve unique slopes or other factors that would exacerbate wildfire risks. However, construction-related activities associated with the Proposed Project could involve the use of spark-producing construction equipment, which could temporarily increase the risk of igniting a fire within the Project Area. This is a potentially significant impact. To reduce the risk of wildland fires, Mitigation Measure HAZ-2 would be required to mitigate the potential to ignite fires during construction, such as requiring construction equipment to be equipped with a spark arrestor in good working order. Operation of the Proposed Project would not increase the risk of wildfire. Therefore, with implementation of Mitigation Measure HAZ-2, the Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and impacts would be less than significant.

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?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

The Project Area is located within a Moderate Fire Hazard Severity Zone within a LRA, as designated by the CAL FIRE Fire Hazard Severity Zone Map. A High Fire Hazard Severity Zone within a SRA borders the eastern boundary of the Project Area and a Very High Fire Hazard Severity Zone within a SRA is located approximately 1.3 miles east of the Project Area (CAL FIRE 2024). The risk of igniting a wildfire during construction is not likely, as construction would occur in a currently developed area. Furthermore, the Project Area does not involve unique slopes or other factors that would exacerbate wildfire risks.

However, construction-related activities associated with the Proposed Project could involve the use of spark-producing construction equipment, which could temporarily increase the risk of igniting a fire within the Project Area. This is a potentially significant impact. To reduce the risk of wildland fires, Mitigation Measure HAZ-2 would be required to mitigate the potential to ignite fires during construction, such as requiring construction equipment to be equipped with a spark arrestor in good working order. Operation of the Proposed Project would not increase the risk of wildfire. Therefore, with implementation of Mitigation Measure HAZ-2, the Proposed Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and impacts would be less than significant.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

No Impact.

The Proposed Project would not substantially alter the existing drainage pattern of the Project Area and the Project Area is relatively flat. Components of the Proposed Project would not expose people or structures to significant risks as a result of flooding, post-fire slope instability, or drainage changes. No impact would occur.

4.20.3 Mitigation Measures

HAZ-2: See *Section 4.9 Hazards and Hazardous Materials* for the full text of Mitigation Measure HAZ-2.

4.21 Mandatory Findings of Significance

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

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

As discussed in the previous sections, the Proposed Project could potentially have significant environmental effects with respect to Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Tribal Cultural Resources, and Wildfire. However, the impacts of the Proposed Project would be reduced to a less-than-significant level with the implementation of the mitigation measures identified in the sections.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐

Less than Significant Impact with Mitigation Incorporated.

Cumulative impacts are defined as two or more individual (and potentially less than significant) project effects that, when considered together or in concert with other projects combine to result in a significant impact within an identified geographic area. In order for a project to contribute to cumulative impacts, it must result in some level of impact on a project specific level.

As discussed throughout this Initial Study, potentially significant impacts were identified for Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, and Tribal Cultural Resources, and Wildfire. The Proposed Project's contribution to cumulative impacts would not be considerable with the incorporation of Mitigation Measures listed in this Initial Study. Furthermore, other projects would be subject to CEQA and would undergo the same level of review as the Proposed Project and include mitigation measures to minimize potentially significant impacts.

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

Less than Significant Impact with Mitigation Incorporated.

The potential direct environmental effects of the Proposed Project have been considered within the discussion of each environmental resource area in the previous sections. When appropriate, mitigation measures have been provided to reduce all potential impacts to a less-than-significant level.

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