DRAFT

Initial Study and Mitigated Negative Declaration for the Butte Fire Center Replacement Project

CEQA Lead Agency:

California Department of Forestry and Fire Protection

Prepared for:

California Department of General Services
Real Estate Services Division

Real Estate Services Division
707 Third Street, Fourth Floor
West Sacramento, California 95605

October 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

DRAFT

Initial Study and Mitigated Negative Declaration

BUTTE FIRE CENTER REPLACEMENT

Butte County, California

Lead Agency:

California Department of Forestry and Fire Protection
1416 9th Street
Sacramento, CA 95814

Prepared for:

DGS CALIFORNIA DEPARTMENT OF GENERAL SERVICES

Prepared by:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

October 2021

DRAFT MITIGATED NEGATIVE DECLARATION
BUTTE FIRE CENTER REPLACEMENT

Lead Agency: State of California Department of Forestry and Fire Protection (CAL FIRE)

Project Proponent: State of California Department of General Services (DGS), Real Estate Services Division (RESD)

Project Location: The Project site is located at 6640 Steiffer Road in Magalia, Butte County. The 84.1-acre site is located adjacent to Paradise Lake; however, the Proposed Project involves work within the most heavily developed portions of the site. The Project site is bounded to the west and south by heavily forested land and to the north and east by Paradise Lake.

Project Description: The proposed Project entails the partial demolition and reconstruction of a California Conservation Corp (CCC)/CAL FIRE joint fire base and associated facilities and structures. New buildings include administration, Captain's barracks, CCC Corpsmember crew dorms, laundry building, multipurpose building, fueling station, auto shop, apparatus garages, training, warehouse, vehicle wash enclosure, hose wash racks, electrical building, and generator. Site work includes new asphalt and concrete paving and concrete flatwork, PV arrays on covered parking structures, new underground utilities, and aboveground fuel tanks.

Public Review Period: **October 13, 2021 – November 12, 2021**

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Biological Resources

The following general measures are required to avoid impacts to onsite biological resources:

BIO-1: Worker Environmental Awareness Program

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

Special-Status Plants

There is potential or low potential for 26 special-status plants to occur within the Study Area. The following measures are required to minimize potential impacts to special-status plants:

PLANT-1: Special-Status Plant Surveys

- A qualified biologist shall perform floristic plant surveys according to USFWS, CDFW, and CNPS protocols prior to construction, timed according to the appropriate phenological stage for identifying target species. Known reference populations shall be visited or local herbaria records shall be reviewed, if available, prior to surveys to confirm the phenological stage of the target species. If no special-status plants are found within the Project site, no further measures pertaining to special-status plants are necessary.

PLANT-2: Special-Status Plant Avoidance

- If special-status plants are identified within 25-feet of the Project impact area, the following mitigation measures shall be required:
  - If avoidance of special-status plants is feasible, establish and clearly demarcate avoidance zones for special-status plant occurrences prior to construction. Avoidance zones shall include the extent of the special-status plants plus a 25-foot buffer, unless otherwise determined by a qualified biologist, and shall be maintained until the completion of construction. A qualified biologist/biological monitor shall be present if work must occur within the avoidance buffer to ensure special-status plants are not impacted by the work.
  - If avoidance of special-status plants is not feasible, mitigate for significant impacts to special-status plants. Mitigation measures shall be developed in consultation with CDFW. Mitigation measures may include permanent preservation of onsite or offsite habitat for special-status plants or translocation of plants or seeds from impacted areas to unaffected habitats.

Special-Status Birds, Raptors (Osprey, Sharp-Shinned Hawk, Cooper's Hawk, and Bald Eagle), Other Protected Raptors, and MBTA-Protected Birds

For Project activities with potential to affect active raptor nests (e.g., activities proposed to occur in or within 500 feet of suitable habitat), the following measure is required to prevent potential impacts.

BIRD-1: Pre-Construction Nesting Bird Survey for Raptors

- If construction is to occur during the nesting season (generally February 1 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable nesting habitat on the Project site within 14 days of the commencement of construction. The survey shall be conducted within a 500-foot radius of Project work areas for raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined

that the young have fledged and are no longer reliant upon the nest or parental care for survival. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

For Project activities with potential to affect the active nests of other (non-raptor) special-status birds and birds protected under the MBTA (e.g., activities proposed to occur in or within 100 feet of suitable habitat), the following measure is required to prevent potential impacts to active nests.

BIRD-2: Pre-Construction Nesting Bird Survey for Non-Raptors

- If construction is to occur during the nesting season (generally February 1 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable nesting habitat on the Project site within 14 days of the commencement of construction. The survey shall be conducted within a 100-foot radius of Project work. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

Special-Status Bats

There is potential for two special-status bats to occur within the Study Area, and the majority of the Study Area is planned for impact. The following measure is required to minimize potential impacts to special-status bats.

BAT-1: Special-Status Bat Surveys

- Within 14 days prior to Project activities that may impact bat roosting habitat (e.g., removal of manmade structures or trees), a qualified biologist shall survey for all suitable roosting habitat within the Project impact limits. If suitable roosting habitat is not identified, no further measures are necessary. If suitable roosting habitat is identified, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If roosting bats are determined to be present within the Project site, consultation with CDFW prior to initiation of construction activities or preparation of a Bat Management Plan outlining avoidance and minimization measures specific to the roost(s) potentially affected shall be required.

Cultural Resources

CUL-1: Unanticipated Discovery

- If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work shall halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional

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

1. If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify CAL FIRE and DGS. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a Historic Property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.
3. If the find includes human remains, or remains that are potentially human, the professional archaeologist 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.

Geology and Soils

GEO-1: Discovery of Unknown Paleontological Resources.

- If any paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the area shall be isolated using orange or yellow fencing until CAL FIRE is notified and the area is cleared for future work. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resources. In addition, in the event of an inadvertent find, sediment samples should be collected and processed to determine the small fossil potential on the Project site. If CAL FIRE resumes work in a location where paleontological remains have been discovered and cleared, CAL FIRE shall have a paleontologist onsite to observe any continuing excavation to confirm that no additional paleontological resources are in the area. Any fossil materials uncovered during mitigation activities shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

Hazards and Hazardous Materials

HAZ-1: Hazardous Materials Survey Compliance

- The Proposed Project shall comply with all recommendations outlined in the *Hazardous Materials Survey*, as well as all pertinent NESHAP regulations and Cal/OSHA guidelines regarding the proper removal and disposal of hazardous materials from the Project site.

HAZ-2: Dust Prevention

- The Project geologist shall prevent potential NOA from becoming airborne by minimizing prolonged exposure of uncovered earth in multiple areas. If ultramafic rock is or must become exposed to the air, then the following procedures must be put into effect. Water support, in the form of a water truck or mobile storage tank, shall be used in regular intervals to keep the open earth area wet and dust free. Proper signage noting the possibility of NOA and required PPE shall be posted in the area. PPE including coveralls and respirators shall be worn by all workers in the area. These procedures shall be followed as long as ultramafic rock is exposed and can be terminated when the rock is again covered with fill.

Tribal Cultural Resources

TCR-1: Unanticipated Discoveries

- If subsurface deposits are encountered which represent a Native American or potentially Native American resource that does not include human remains, all work shall cease in the vicinity of the find and the contractor shall immediately contact CAL FIRE and DGS and coordinate to contact a member of a culturally affiliated tribe. If the tribal representative determines the find is a TCR, the tribe, CAL FIRE, and DGS shall consult on appropriate treatment measures. Preservation in place is the preferred treatment, if

feasible. 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 Tribal Cultural Resource or a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to their satisfaction. This Mitigation Measure shall be implemented in conjunction with Mitigation Measure CUL-1.

CONTENTS

LIST OF APPENDICES

Appendix A – *Schematic Design, Project Summary & Narratives* - November 2020
NM&R Architects

Appendix B – *CalEEMod Emissions Modeling* - August 2021
ECORP Consulting, Inc.

Appendix C – *Biological Resources Assessment, CAL FIRE/CCC Butte Fire Center Replacement Project, Butte County, California* - September 2021
ECORP Consulting, Inc.

Appendix D – ***CONFIDENTIAL*** *Cultural Resources Inventory and Architectural History Evaluation Peer Review: Butte Fire Center Replacement Project* - September 2021
ECORP Consulting, Inc.

Appendix E – *Proposed Project Total Construction-Related and Operational Gasoline Usage* - August 2021
ECORP Consulting, Inc.

Appendix F –*Geotechnical Engineering Report Butte Fire Center – California Conservation Corps Camp* - January 2021
Mid Pacific Engineering, Inc.

Appendix G – *Hazardous Materials Survey Final Report* - December 2020
Entek Consulting Group, Inc.

- Attachment A – Addendum #1 to Hazardous Materials Report, Asbestos Bulk Sample Results
- Attachment B – Asbestos Requirements
- Attachment C – Requirements for Disturbance of Lead in Construction
- Attachment D – Other Hazardous Materials

Appendix H – *Project Baseline Noise Measurements* - August 2021
ECORP Consulting, Inc.

LIST OF TABLES

LIST OF FIGURES

ACRONYMS AND ABBREVIATIONS

Term	Description
˚F	Fahrenheit
AB	Assembly Bill
ACCM	Asbestos-Containing Construction Material
ACM	Asbestos-Containing Materials
Amsl	Above mean sea level
BA	Biological Assessment
BCC	Bird of Conservation Concern
BFC	Butte Fire Center
BCAG	Butte County Association of Governments
BCAQMD	Butte County Air Quality Management District
BLM	Bureau of Land Management
BMPs	Best Management Practices
BO	Biological Opinion
BP	Before Present
BRA	Biological Resources Assessment
CAAQS	California Ambient Air Quality Standards
CAC	Certified Asbestos Consultant
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
Cal/OSHA	State Department of Industrial Relations, Division of Occupational Safety and Health
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCC	California Conservation Corps
CCR	California Code of Regulations
CDCR	California Department of Corrections and Rehabilitation
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEC	California Energy Commission

Term	Description
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH_4	Methane
CHL	California Historical Landmark
CHP	California Highway Patrol
CHRIS	California Historic Resources Information Center
CIWM	California Integrated Waste Management
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
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
Cy	Cubic yard
dBA	A-weighted decibel
DGS	Department of General Services
DHS	Department of Health Services
DOC	Department of Conservation
DPM	Diesel Particulate Matter
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
Eagle Protection Act	Bald and Golden Eagle Protection Act
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EMFAC	EMission FACtor
ESA	Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas
HAZWOPER	Hazardous Waste Operations and Emergency Response
Hp	Horsepower
IS	Initial Study
kWh	Kilowatt hour
LBP	Lead-based paint
LCP	Lead Containing Paint
LEED	Leadership in Energy and Environmental Design
LEP	Linear Extensibility Percent
L_{dn}	Day-Night Average Sound Level
L_{eq}	Equivalent Noise Level
LRA	Local Responsibility Area

Term	Description
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendent
Mmax	Maximum Magnitude Earthquakes
MND	Mitigated Negative Declaration
MPE	Mid Pacific Engineering, Inc.
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOA	Naturally Occurring Asbestos
NO_x	Nitrogen Oxides
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	Northern Sacramento Valley Air Basin
O_3	Ozone
OPR	Office of Planning and Research
PG&E	Pacific Gas & Electric Company
pCi/L	picocuries per liter
PLM	Polarized light microscopy
PM	Particulate Matter
PM_{10}	Coarse Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
PPE	Personal Protective Equipment
ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
Project	Butte Fire Center
Proposed Project	Butte Fire Center
PV	Photovoltaic
RACM	Regulated Asbestos Containing Material
RESD	Real Estate Services Division
ROG	Reactive Organic Gas
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
sf	Square feet/foot
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act

Term	Description
SMGB	State Mining and Geology Board
SO_2	Sulfur Dioxide
SPCC	Spill Prevention, Control and Countermeasure
SR	State Route
SRA	Sensitive Receptor Area
SSC	Species Of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCR	Tribal Cultural Resource
THP	Timber Harvesting Plan
TPA	Transit Priority Area
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	Vehicle Miles Traveled
WBWG	Western Bat Working Group
WDR	Waste Discharge Requirement

THIS PAGE INTENTIONALLY LEFT BLANK

1.0 BACKGROUND

Summary

Project Title:	Butte Fire Center Replacement
Lead Agency Name and Address:	California Department of Forestry and Fire Protection 1416 9th Street Sacramento, California 95814
Contact Person and Phone Number:	Ms. Terry Ash Senior Environmental Planner/Project Manager California Department of General Services RESD-PMDB Environmental Services, MS 509 707 3rd Street, 4th Floor West Sacramento, California 95605 (916) 376-1700 terry.ash@dgs.ca.gov
Project Location:	6640 Steiffer Road Magalia, California 95954 Butte County
General Plan Designation:	Public
Zoning:	Public

1.1 Introduction

The California Department of Forestry and Fire Protection (CAL FIRE) is the Lead Agency for this Initial Study (IS), which has been prepared to identify and assess potential environmental impacts of the proposed Butte Fire Center Replacement. This document has been prepared by DGS on behalf of CAL FIRE to satisfy the California Environmental Quality Act (CEQA) (Public Resources Code [PRC], Section 21000 et seq.) and State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects. A CEQA IS is generally used to determine which CEQA document is appropriate for a project (Negative Declaration [ND], Mitigated Negative Declaration [MND], or Environmental Impact Report [EIR]).

In accordance with CEQA, this IS/MND will be circulated for a 30-day public review and comment period. Written comments on the Draft IS/MND should be submitted to:

Ms. Terry Ash, Senior Environmental Planner
cc: Matteo Rodriquez
2525 Warren Drive
Rocklin, California 95677

or via email:

mrodriquez@ecorpconsulting.com

Subject Line: Butte Fire Center

2.0 PROJECT DESCRIPTION

2.1 Project Background and Objectives

CAL FIRE and the CCC propose to upgrade the existing Butte Fire Center (BFC, Proposed Project, or Project) adjacent to Paradise Lake in unincorporated Magalia, Butte County. The Butte Fire Center started in 1949 as the Magalia Camp under CAL FIRE and the California Department of Corrections and Rehabilitation (CDCR). CAL FIRE and CDCR continued to jointly manage the camp until approximately 1973, when the CDCR withdrew inmates from the camp. In 1974, the camp again opened as the Butte Ecology Center, this time jointly operated by CAL FIRE and the California Ecology Corps. The California Ecology Corps continued to exist until 1978, when the camp became Butte Fire Center under the joint direction of CAL FIRE and the CCC, and this use remained until 2003, when the CCC withdrew. From 2003 until 2016, the Butte Fire Center (owned by CAL FIRE) was utilized as a northern region training facility for firefighters throughout California. In 2016, CAL FIRE and the CCC rejoined operations as a fire crew facility. The Project site is currently the operational Butte Fire Center (BFC) and is located in the CAL FIRE Butte Unit, an emergency response coalition consisting of CAL FIRE, Butte County Fire Department, City of Biggs, City of Gridley, and Town of Paradise fire departments. Butte Fire Center provides coverage to Magalia and unincorporated Butte County and the Plumas and Lassen National Forests (CAL FIRE 2021).

2.1.1 California Conservation Corps

The CCC is a department within the California Natural Resources Agency. It provides young men and women 18-25 years old one year of paid service to the State of California and educational opportunities. During their year of service, *Corpsmembers* work on environmental projects and respond to natural and humanmade disasters. Through this work, they gain skills and experience that lead to meaningful careers. The CCC is organized into northern and southern California regions. The BFC is within the northern region.

The CCC has more than two dozen residential and nonresidential locations throughout the state and is the only state program with year-round residential centers. District Service Centers help Corpsmembers tackle more than 900 projects annually, with more than 2,400,000 hours worked, generating more than $26 million. These facilities support the mission of the CCC, and the revenue stream generated from its activities.

CCC crew members go through a rigorous two-week CAL FIRE training program before being assigned to a fire crew. As a CAL FIRE/CCC Type 1 fire crew, the unit is able to respond to wildland fires, search and rescue, and flood fighting incidents. While not fighting fires, the fire crews work on fire hazard reduction and other community projects. The BFC accommodates approximately 80 CCC Corpsmembers and 22 CCC staff. CAL FIRE staff train and supervise the fire crews, provide forest practice operations, and operate a full auto repair shop, employing approximately 33 personnel.

2.2 Project Characteristics

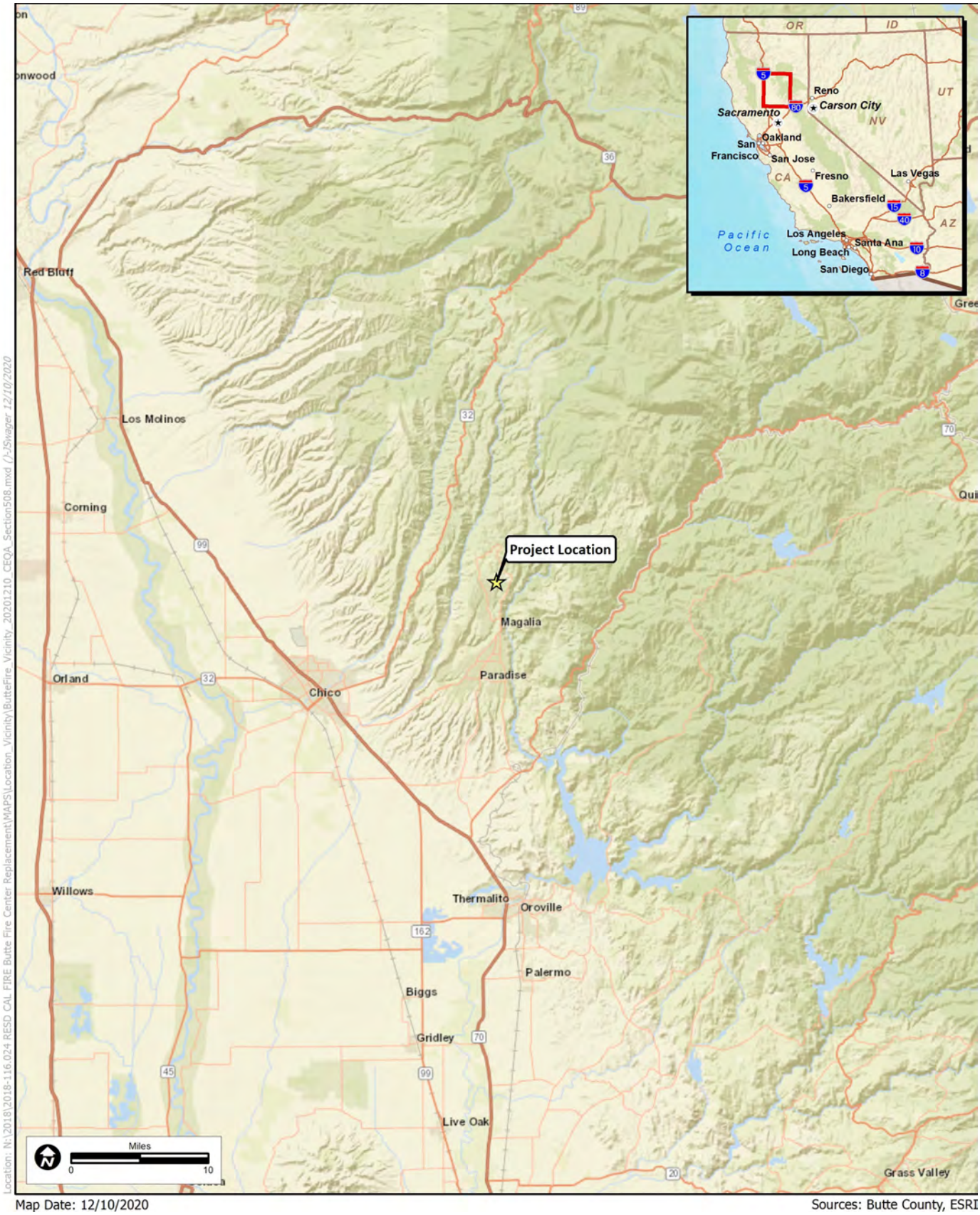
2.2.1 Site Location and Setting

The Project site is located at 6640 Steiffer Road in Magalia, Butte County (Figures 2-1 and 2-2). The 84.1-acre site is located adjacent to Paradise Lake; however, the Proposed Project involves work on approximately 39.39 acres within the most heavily developed portions of the site. The Project site is bounded to the west and south by heavily forested land and to the north and east by Paradise Lake. Additionally, there are some rural residences to the south and west (Figure 2-3). Most of the existing facility is located 1,000 feet or more from the water's edge. The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. Retaining walls will be needed to provide level building pads at several locations throughout the camp. Existing vegetation is varied and includes grasslands, barren areas, and heavily forested areas (Figures 2-4 and 2-5).

2.2.2 Timber Harvesting Plan

The projected tree demolition count for the Project is approximately 881, considering the 3:1 slopes where extended grading is required away from currently developed areas. The largest trees will be preserved wherever possible. A Timber Harvesting Plan (THP), the environmental review document submitted by landowners to CAL FIRE outlining what timber is to be harvested, how it will be harvested, and the steps that will be taken to prevent damage to the environment, will be prepared. THPs are prepared by Registered Professional Foresters who are licensed to prepare these comprehensive, detailed plans. The CAL FIRE Butte Unit will work with the CAL FIRE Redding Regional Office, which is tasked with serving Butte County for THP review.

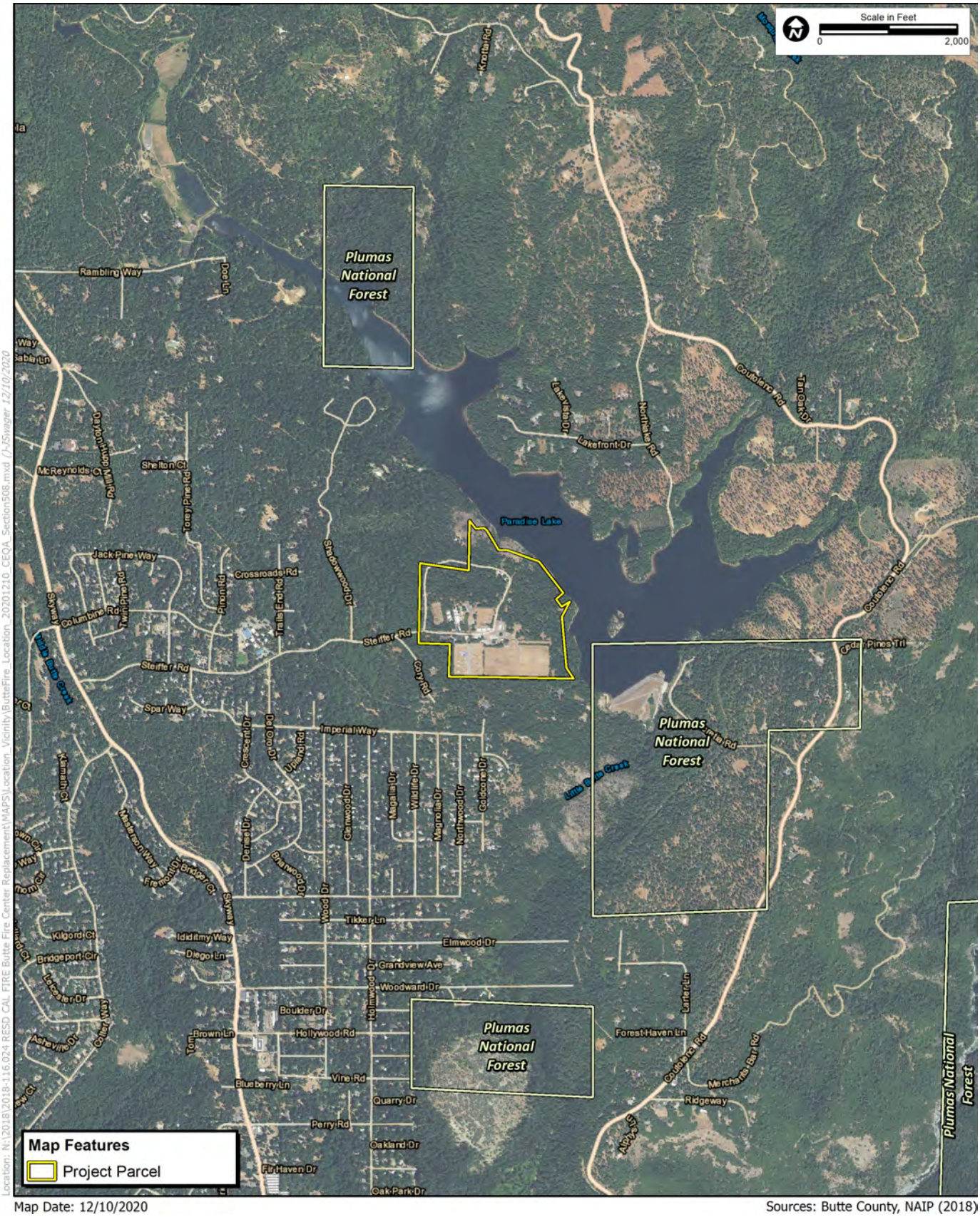
CAL FIRE estimates timber harvesting to comprise 20 days using approximately 15 personnel. Heavy machinery used during the process will include a harvester, forwarder, chipper, loader, four timber haulers, three chip haulers, four mob/demob transports, and four pickup vehicles.



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-1. Project Location

2018-116.024 Butte Fire Center Replacement



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-2. Project Vicinity

Location: N:\2018\2018-116.024 RESD CAL FIRE Butte Fire Center Replacement\MAPS\CEQA\BFCR_SurroundingUses_20210820.mxd (KT) kturnquist 9/17/2021

Map Date: 9/17/2021
Photo Source: ESRI World Imagery Clarity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-3. Surrounding Land Uses

2018-116.024 RESD CAL FIRE Butte Fire Center Replacement

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-4. Project Aerial

2018-116.024 Butte Fire Center Replacement

Butte Fire Center entrance sign.

Looking east toward existing retention basin.

Looking east down Steiffer Road. Garages on south side of road would be demolished.

Existing captain's barracks, to be demolished.

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-5a. Representative Site Photographs

Existing auto shop, to be demolished.

Existing refrigerated storage building, to be demolished.

Existing greenhouse, to be demolished.

Existing CCC administration building, to be demolished.

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-5b. Representative Site Photographs

2.2.3 Project Statistics

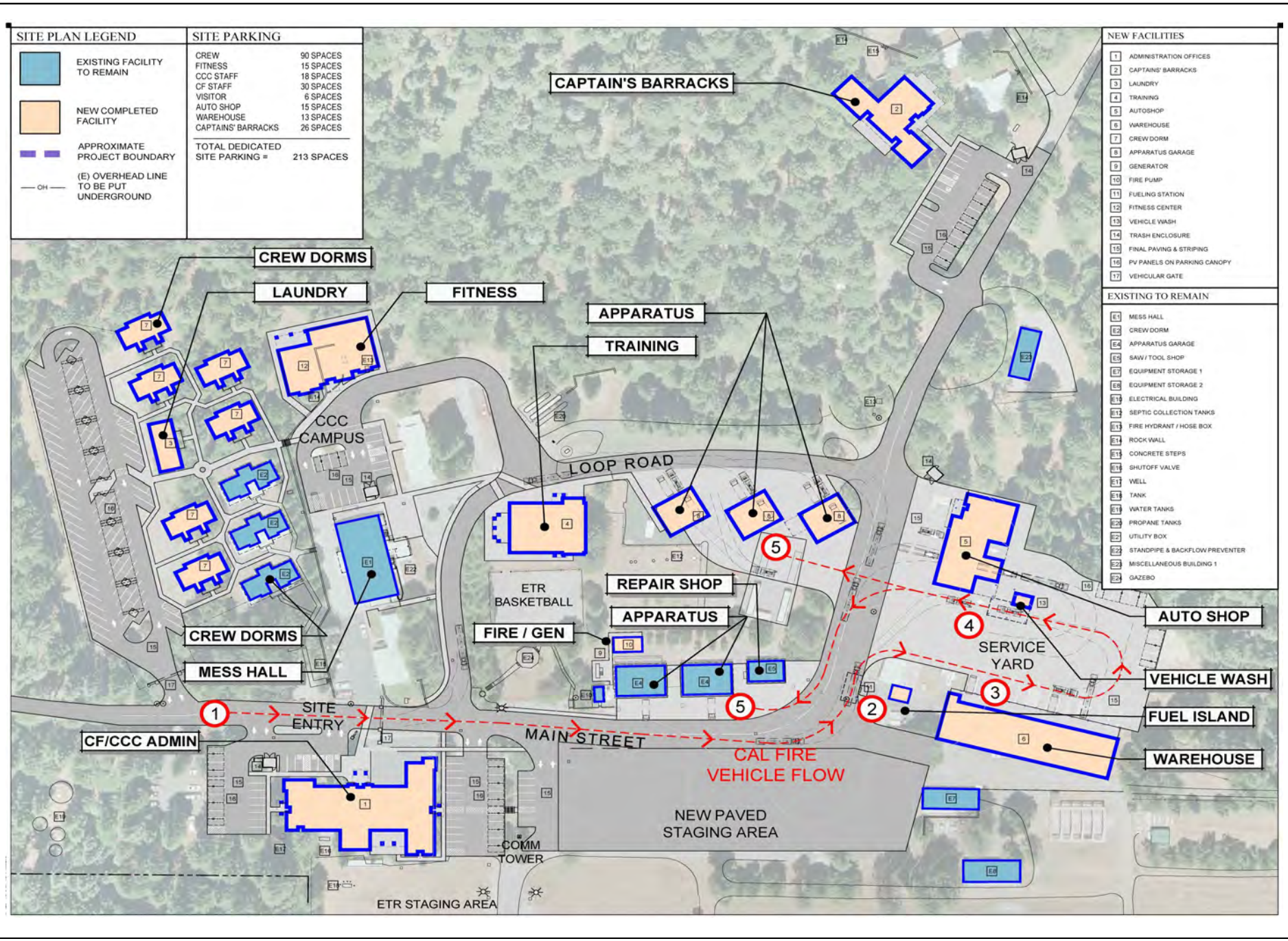
The Proposed Project will replace and expand the existing BFC and CCC camp in Magalia (Table 2-1 and Figure 2-6). Construction will be split into two phases, each defined by a demolition and construction component. Refer to Section 2.5 *Construction Details* to see a breakdown of buildings to be demolished and constructed by phase. New construction will consist of approximately 64,000 total square feet (sf). Several existing buildings or structures will be demolished as part of the Project, totaling 42,743 sf. Structures to be demolished include the administration buildings, abandoned building, Captain's and crew barracks, fitness building, fueling station, greenhouse, laundry building, refrigerated storage, shop building, tool shed, training building, warehouse, and various garages/sheds (Table 2.3-1). The net additional area to be added is 21,257 sf. New structures at the fire center will include 19 buildings consisting of a combined CAL FIRE/CCC administration building, Captain's barracks, six dormitories, training building, laundry building, multi-purpose building with recreation facilities, auto shop, warehouse with work area, three apparatus vehicle garages, vehicle wash cover and equipment enclosure, an electric gear building, and hazardous materials storage structure. Existing structures to be retained on site include three dormitories, two apparatus garages, two equipment storage buildings, mess hall, repair shop, and propane tanks. The site will include asphalt paved surfaces for driveways and parking, concrete paving for service areas and walkways, landscaping, infrastructure upgrades, including the undergrounding of an existing power line, the addition of a communications tower, new water storage tanks, and a photovoltaic solar array constructed on canopies over two parking areas. The facility is intended to be achieve at minimum a Leadership in Energy and Environmental Design (LEED) Silver certification. The Proposed Project would be constructed on property currently controlled by CAL FIRE and CCC.

One roadway connection point is available from Steiffer Road, which serves as the only realistic means of vehicular access to the site. A secondary forest road loops from the north end of the site back to Steiffer Road. The primary driveway is at the southwest corner of the site and will be repaved and expanded to reduce congestion. An internal road – allowable over an existing Pacific Gas & Electric Company (PG&E) easement – provides connection between the onsite facilities. An existing gravel road connecting the existing facility to the Captain's Barracks will be improved to facilitate access. An existing gravel staging area near the middle of the site will be paved to become an internal loop road allowing vehicle circulation through the facility without the need for backing up. A new staging area for overflow vehicles will be created on the south end of the site once existing buildings are demolished. The Project proposes 213 dedicated parking spaces, the allocation of which is shown in Figure 2-6. Table 2.3-1 provides a summary of structures to be demolished, retained, and constructed as part of the Project.

While all buildings would be designed to meet the U.S. Green Building Council's LEED Silver rating requirements, registration and certification will not be pursued. Detailed descriptions of the proposed new facilities and improvements are provided below and design considerations for each building and improvement are provided in *Appendix A - Schematic Design, Project Summary & Narratives*.

Table 2-1. Proposed Demolished, Remaining, and New Structures

Structures to be Demolished	Square Feet	Structures to Remain	Square Feet	Proposed New Structures	Square Feet
Abandoned Building	3,325	Apparatus Garages (2)	2,015 each	Administration	12,144
Administration – CAL FIRE	2,615	Carpenter's Shop	3,245	Apparatus Garage Building	2,000
Administration – CCC	2,591	Crew Dormitories (3)	1,490 each	Auto Shop	6,839
Auto Shop	~5,000	Electrical Building	237	Captain's Barracks	5,300
Captain's Barracks 1	1,291	Equipment Sheds (2)	1,577 each	Crew Dormitories (6)	1,537 each
Captain's Barracks 2	1,356	Mess Hall	5,047	Electrical Building	588
Captain's Garage 1	544	Propane Tank	5,000 gallons	Hazardous Materials Storage	381
Captain's Garage 2	625	Repair Shop	976	Laundry	1,560
Crew Barracks	4,940			Multi-Purpose/Fitness	6,917
Fire Pump	417			Training	5,471
Fitness	1,433			Warehouse	9,911
Fueling Station	390			Water Tanks (2)	170,000 gallon
Greenhouse	2,636			Vehicle Wash Enclosure	196
Laundry	484			Vehicle Fuel Tank	3,000 gallon
Refrigerated Storage	2,107				
Shop Building	5,867				
Storage Building	528				
Training	1,733				
Warehouse/Tool Shed	4,845				
Water Tanks (5)	10,000 gallons				



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-6. Site Plan

2.2.3.1 Administration Building

The administration building will include 20 offices, three conference rooms, two records rooms, two open plan workspace areas, a breakroom, lobby and reception area, bathroom, janitorial closet, and various storage closets. This building would be located in the southwest corner of the Project site, along the entrance driveway. There will be separate wings for CCC and CAL FIRE personnel. The new administration building will be constructed during Phase 1. This building will replace the existing separate CCC and CAL FIRE administration buildings on the site. The existing CCC administration building will be demolished during Phase 2 and the existing CAL FIRE administration building will be demolished during Phase 2.

2.2.3.2 Captain's Barracks

This building will consist of 10 two-person bedrooms, five bathrooms, laundry room, fitness room, library, kitchen, pantry, dining area, and coat room. The Captain's barracks will be located in the northeast corner of the Project site. This building will be constructed during Phase 1 and will replace three smaller structures that currently serve as Captains Barracks and a garage and storage facility. These structures will be demolished as part of Phase 2.

2.2.3.3 Crew Dormitories

The six new crew dormitories and three existing dormitories that will be retained would sleep up to 10 people per building and include five dormitory-style rooms and three bathrooms each. Corpsmembers will prepare for, report for, and be transported to project worksites from these buildings after morning exercise and dining activities. At the end of the workday, Corpsmembers will return to the facility to bathe, prepare for dining, attend evening classes, and participate in recreational activities. Each Corpsmember is provided with a mattress and linens on a built-in bed with storage space, closet, desk, centralized bathrooms, shower, and lavatories. The crew dormitories will be located in the northwest portion of the Project site and will be constructed during Phase 1.

2.2.3.4 Warehouse

The new warehouse will be used for storage and vehicle maintenance and will facilitate crew meetings for briefing and debriefing before and after work projects. It will contain two offices, personal protective equipment (PPE) storage, laundry intake facility, CCC gear storage, breakroom, and bathroom. Crews will use this building as a meeting location in the mornings for preparing and cleaning tools, clothing, and materials for work projects. The warehouse building will receive vehicular and pedestrian traffic both at the beginning and end of each day. It will have maximum visibility throughout the building and surrounding yard to prevent any potential incidents and provide means for passive security controls. The warehouse will be located in the eastern portion of the site, and will be constructed during Phase 1. The existing warehouse will be demolished as part of Phase 1.

2.2.3.5 Laundry Building

The laundry building will be located near the crew dormitory buildings and will be constructed during Phase 1. The existing laundry building will be demolished during Phase 2.

2.2.3.6 Apparatus Buildings and Repair Shop

The two existing apparatus buildings and the repair shop located in the center of the Project site will remain for equipment storage and repairs. Three new apparatus buildings will be constructed as part of Phase 1 in the former gravel staging area in the middle of the loop road.

2.2.3.7 Training Building

The new training building will be located in the center of the Project site. It will consist of two classrooms, two storage rooms, two offices, a copy room, men's and women's bathrooms, and a break room. The new training building will be constructed during Phase 1, and the existing training building will be demolished during Phase 2.

Classroom training for Corpsmembers typically occurs Monday-Friday between the hours of 7:00 a.m. and 9:00 p.m. Corpsmembers reside onsite ,while some instructors drive to the Center from offsite locations. The type and duration of typical training activities is summarized below:

- *John Muir Charter School* – Monday-Thursday 1:00 p.m. to 9:00 p.m. and Friday 8:00 a.m. to 5:00 p.m.
- *Career Training* – once per week 11:00 a.m. to 3:00 p.m.
- *Navigator Class* – once per week 6:00 p.m. to 9:00 p.m.
- *Conservation Awareness Class* – once per week 5:00 p.m. to 9:00 p.m.
- *Computer Lab Class* – once per week; 5:00 p.m. to 9:00 p.m.
- *Community Outreach Mobile Education Training (boot camp)* – monthly; Monday-Friday 7:00 a.m. to 7:00 p.m. for 75 hours
- *Flood Training* – eight times per year; Monday-Friday 8:00 a.m. to 6:00 p.m. for 14 hours
- *Boating and Waterway Training* – monthly; 7:00am to 7:00pm for 10 hours
- *Chain Saw Training* – quarterly; Monday-Friday 8:00 a.m. to 5:00 p.m. for 40 hours
- *Hazardous Waste Operations and Emergency Response (HAZWOPER) Training* – annually; Monday-Friday 8:00 a.m. to 5:00 p.m. for 40 hours
- *Blue Card Training (Class B license)* – six times per year for 12 hours
- *Tree Climbing Training* – twice monthly; Monday-Wednesday 8:00 a.m. to 5:00 p.m. for 24 hours
- *Fire Training* – twice monthly; Monday-Friday 8:00 a.m. to 5:00 p.m. for 40 hours

2.2.3.8 Multi-Purpose/Fitness Building

The multipurpose building, which includes an exercise facility, would be operated primarily Monday-Friday from 4:30 a.m. to 10:00 p.m. and 7:00 a.m. to 10:00 p.m. on the weekends. Additional informal use would occur as well. During emergency events, the multi-purpose building could be used for temporary worker

shelter. This building will be located in the central portion of the Project site, near the existing mess hall and would be constructed during Phase 1. This new structure would be constructed adjacent to the existing basketball court. The existing gym to the west of the current CAL FIRE Administration building would also be demolished during Phase 1.

2.2.3.9 Auto Shop

The auto shop will consist of three vehicle service bays, three offices, welding room, parts room, saw shop, fluids storage, locker room, bathroom, and break room, and outdoor covered and fenced tire rack area. This building would be located in the eastern portion of the Project site, along the main driveway, and would be constructed during Phase 1. The existing auto shop would be demolished during Phase 2.

2.2.3.10 Vehicle Wash

The Project includes a vehicle wash and an adjacent equipment enclosure located in the eastern portion of the Project site, near the auto shop and would be constructed during Phase 1.

2.2.3.11 Electrical Building

This building is located just north of the existing apparatus buildings, central to the Project site. It will an electric equipment room, restrooms, and storage room, and would be constructed during Phase 1.

2.2.3.12 Hazardous Materials Building and Fuel Tank

This area would include a 3,000-gallon split fuel tank, storing 1,000 gallons of gasoline and 2,000 gallons of diesel. The hazardous materials building will be three rooms, including a bulk fluids room that will store 55-gallon drums and a torch storage room. The hazmat building and fuel tank will be located southeast of the new apparatus buildings and would be constructed during Phase 1.

2.2.3.13 Other Onsite Improvements

The site is bisected by a 20-foot-wide pole line easement for PG&E. This line will be undergrounded through the central part of the Project site as part of the Project.

2.2.4 Utilities

2.2.4.1 Water

The Del Oro Water Company currently provides service to the site. The water main located in Steiffer Road is sufficient to continue serving the site. A fire pump will be installed to boost pressure for the fire suppression system. New domestic water and fire water distribution systems will be installed to each building connecting to the existing water system. Fire water improvements include storage tanks, pump and pressure system, fire hydrants, backflow prevention, and the fire pump.

2.2.4.2 Stormwater

A new retention basin will be installed as part of the Project and will be located in the same area of the existing retention basin, north of the proposed multi-purpose and apparatus buildings. The new retention

basin will be approximately 55,552 sf. The basin is designed to store stormwater runoff from the site due to a 100-year storm event. Any excess water will be directed to a designed overflow, where water will flow through cobble and sheet flow following existing drainage patterns. A previously abandoned septic system will be removed as needed for installation of the proposed retention basin.

2.2.4.3 Wastewater

Wastewater collection and treatment is provided by an existing septic system to the south of the facility. New sewer lines will connect to the existing disposal system, and new septic lift stations are needed to connect to the existing leach field. Existing septic tank lids will be raised to the new grade elevation.

2.2.4.4 Electricity

PG&E will continue to provide electricity for the Project site. A photovoltaic (PV) solar array will be constructed on canopies over the parking areas. The PV array will connect to the site's electrical system to offset the fire center's load, but will not tie into the PG&E grid.

2.2.4.5 Telephone

Telephone service is currently supplied by AT&T.

2.2.4.6 Propane

Existing propane tanks serve the site and a new tank is proposed to serve the demand of the new buildings.

2.2.4.7 Solid Waste

Solid waste collection in Magalia is provided by Waste Management.

2.2.5 Offsite Improvements

The Proposed Project will not include any offsite improvements.

2.3 Project Operations

The Butte Fire Center is currently staffed by approximately 33 fulltime CAL FIRE staff, including one division chief, 11 fire captains, one fire engineer, one stationary engineer, one office technician, four resource management technicians, one environmental scientist, nine forestry technicians, one forestry assistant, two heavy equipment mechanics, and one heavy equipment operator. Additionally, approximately 102 combined CCC staff and Corpsmembers operate at the BFC. CCC staff includes one district director, one conservation supervisor, eight conservationists, four administrative staff, three cooks, five special Corpsmembers, and 80 Corpsmembers.

2.4 Project Construction

Project construction is anticipated to start in the off-fire season, May 2023 and be completed within a year to a year and a half, with an end goal of November 2024. Construction activities would start when Project funding has been fully secured and all construction contracts have been put in place.

2.4.1 Construction Details

According to CAL FIRE, Project construction will be done in two phases, each broken up by a demolition and construction component. Phase 1 demolition will include the warehouse, a greenhouse and shed, two storage buildings, garage, gym, and well house. Phase 1 new construction will include the combined administration building, Captain's barracks, laundry building, auto shop, warehouse, six crew dormitories, training building, three apparatus garages, multipurpose building, and a photovoltaic solar array to be constructed on canopies over two parking areas. Phase 2 demolition will include the CAL FIRE and CCC administration buildings, auto shop, laundry building, crew barracks, and Captain's barracks. Phase 2 construction will include parking lot paving, concrete walks and other final site work. Demolition and construction details for Phases 1 and 2 are shown on Figures 2-7a-e.

2.4.2 Earth Removed from Site

Approximately 41,216 cubic yards (cy) of earth will be cut for the Project, and 32,876 cy of fill will be needed. The remaining 8,340 cy of net cut would have to be trucked off-site. Truck trips associated with this earth removal are evaluated as part of construction impact analysis in Section 4.3 *Air Quality*, Section 4.6 *Energy*, and Section 4.8 *Greenhouse Gas Emissions*.

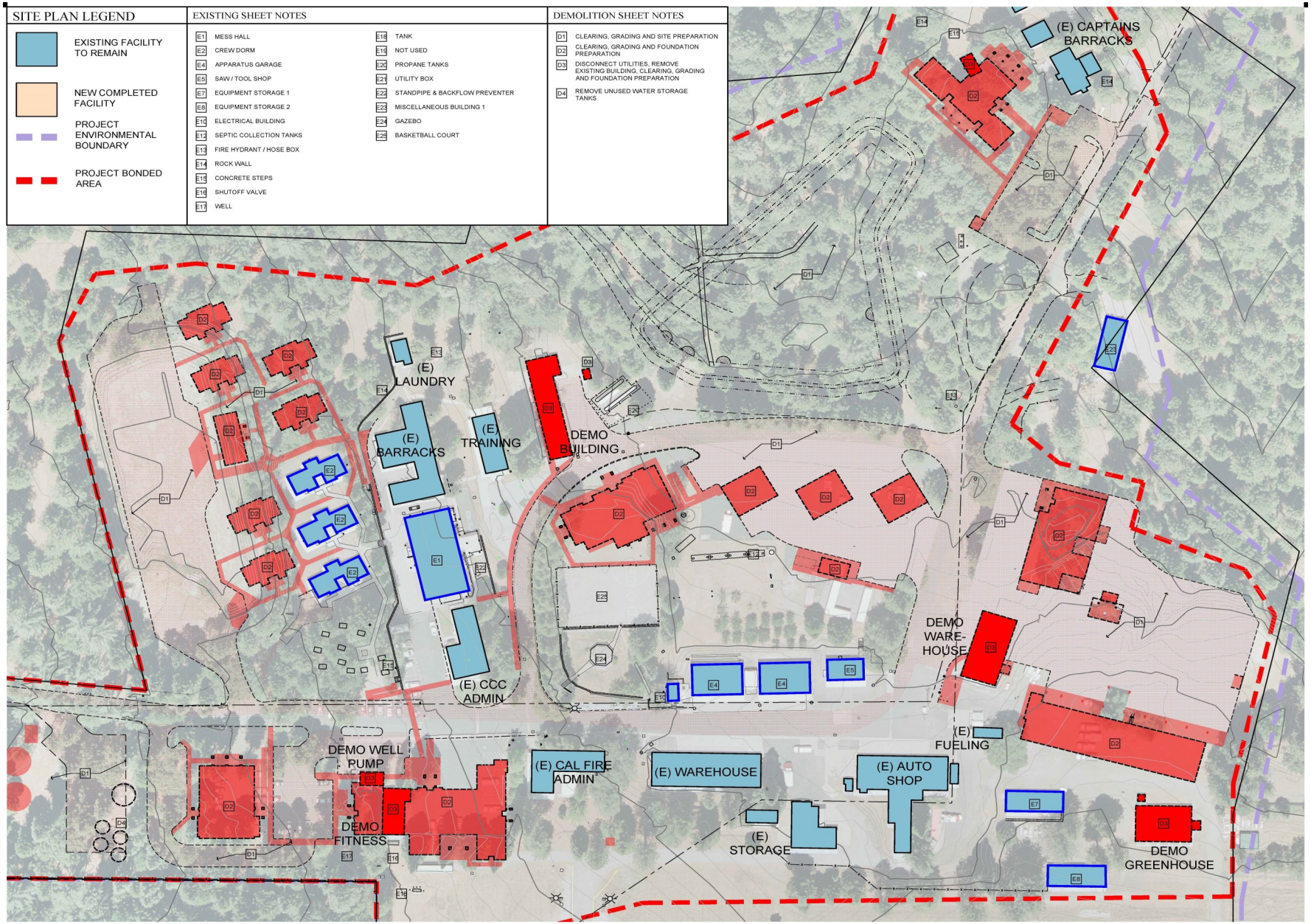
2.5 Regulatory Requirements, Permits, and Approvals

This IS provides the environmental information, analysis, and primary CEQA documentation necessary for CAL FIRE to adequately consider the effects of the proposed construction and operation of the Project. CAL FIRE, as lead agency, has the approval authority and responsibility for considering the environmental effects of the Proposed Project.

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

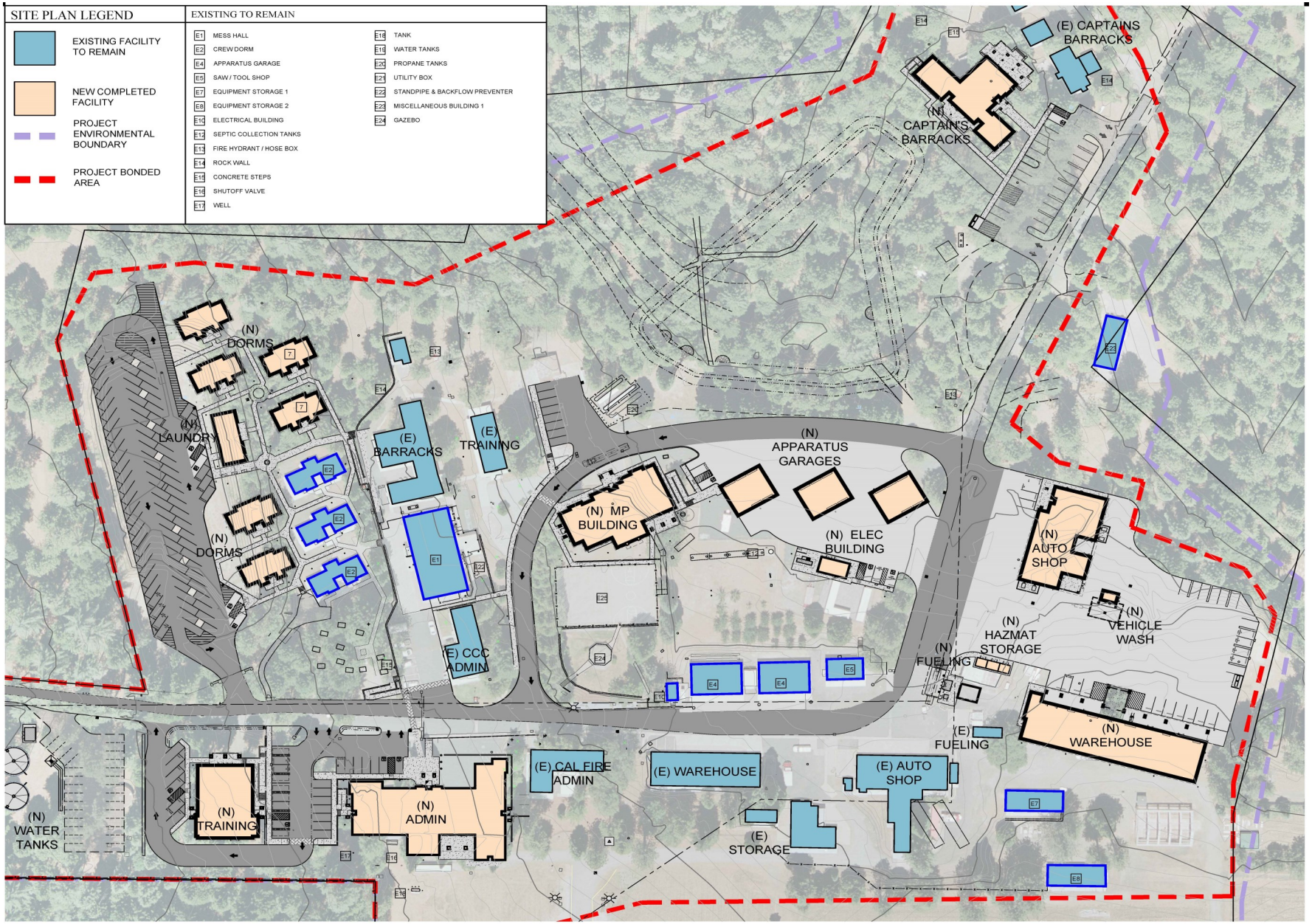
Organization or Issue	Approval or Permit
Central Valley Regional Water Quality Control Board	• Construction General Permit (including the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), and • best management practices (BMPs)
Butte County Air Quality Management District	• Air permit (for the generator) • Authority to Construct Permit
Butte County Public Health Department	Wastewater Permit
California Department of Forestry and Fire Protection	Timber Harvesting Plan
State Fire Marshal; State Architect	• Approval for Americans with Disabilities Act • Fire suppression and code compliance review.

* The Proposed Project would be located on State-owned property and would remain a State-owned and operated facility. As such, the property would not be within permitting jurisdiction of Butte County and permits for planning and building activities are not required.



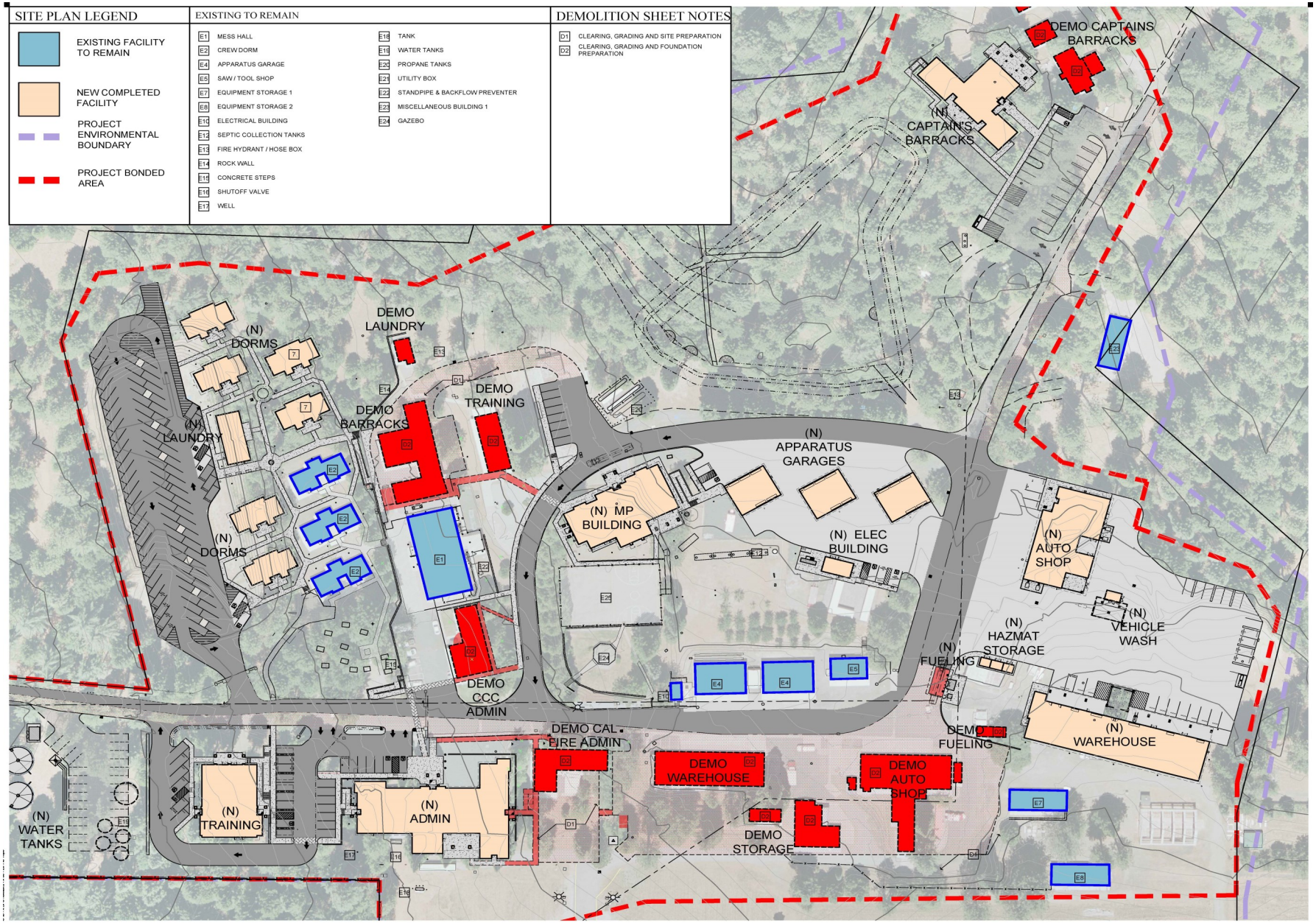
ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-7a. Phase Plan, Phase 1 Demolition



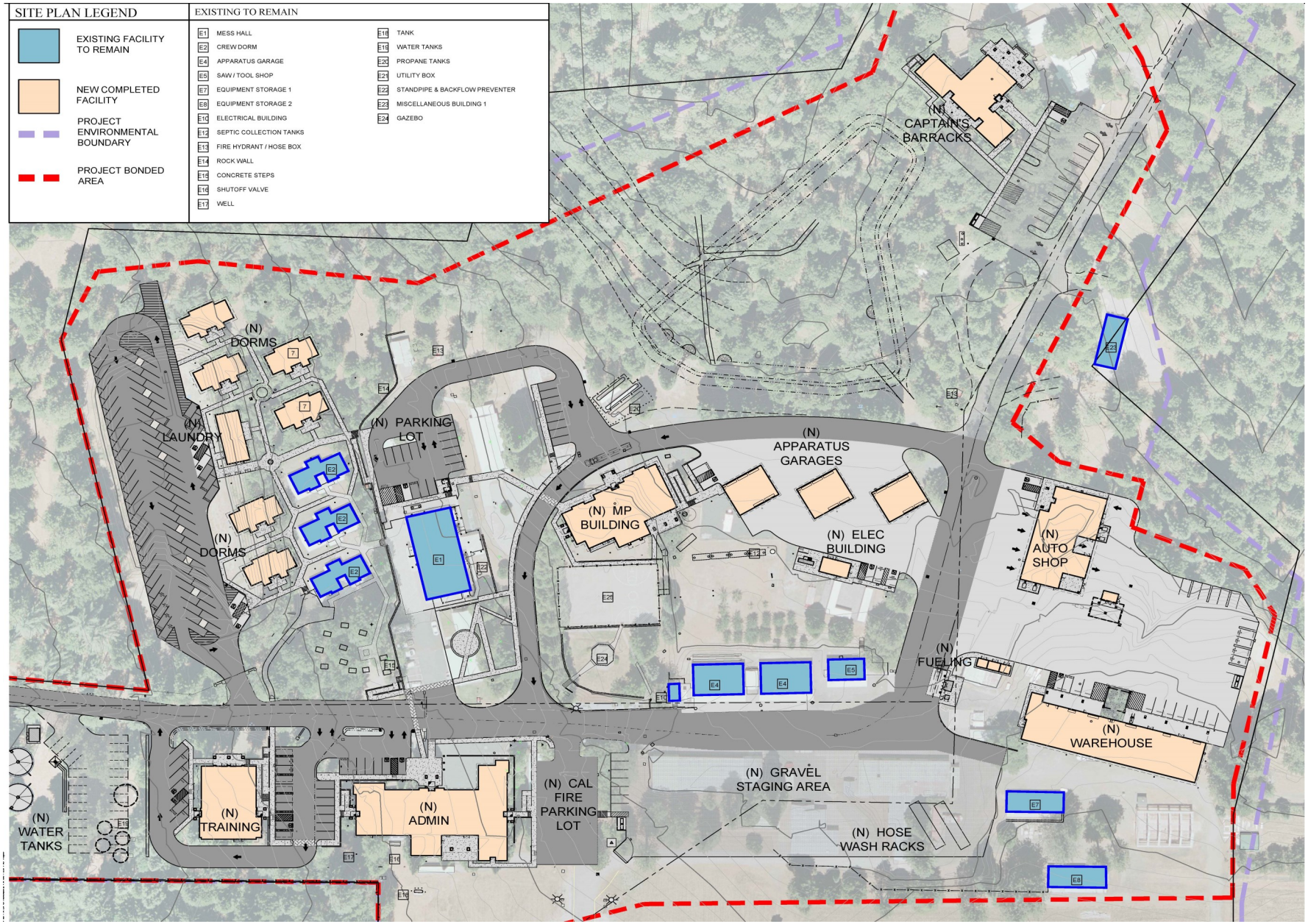
ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-7b. Phase Plan, Phase 1 Construction



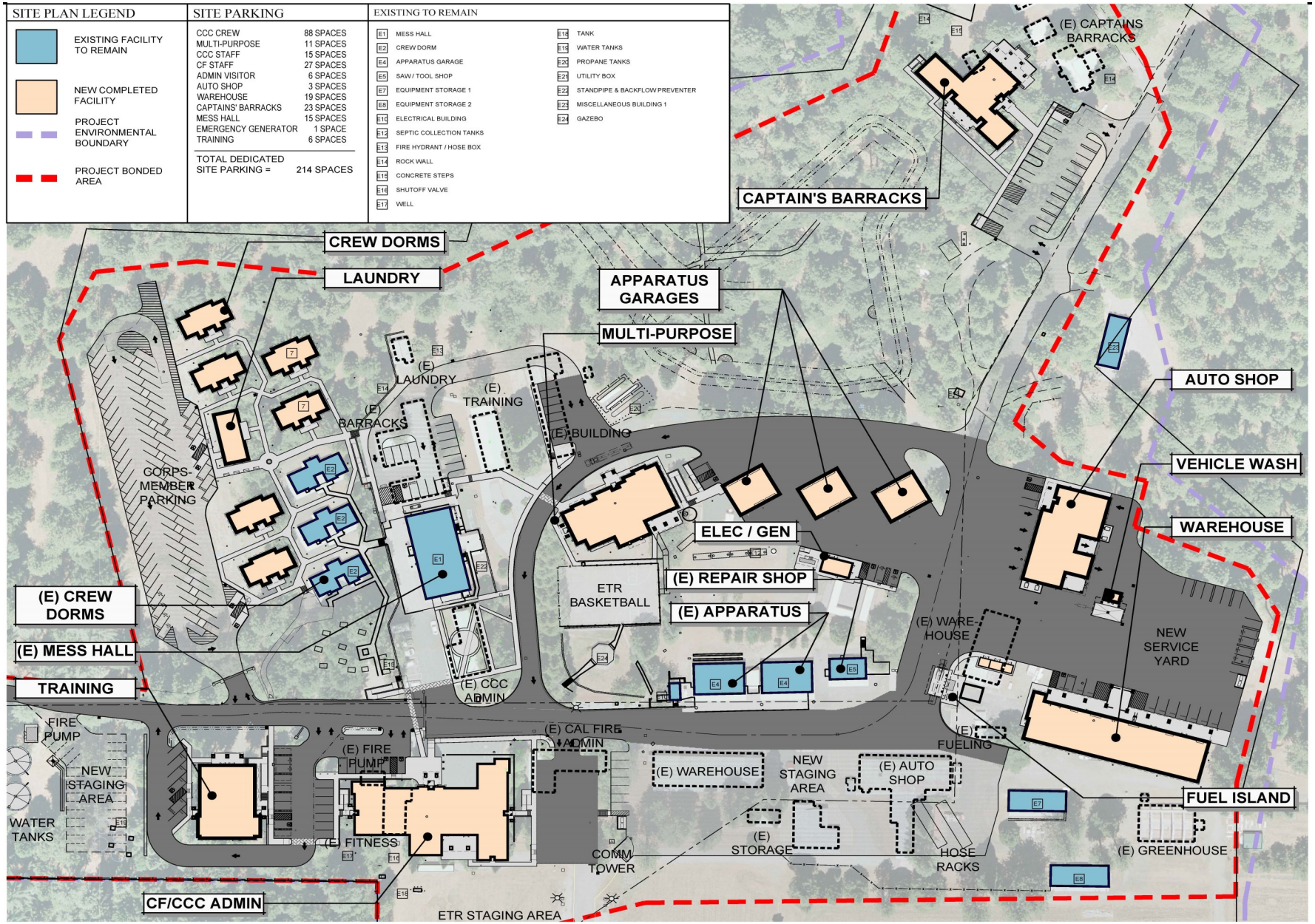
ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-7c. Phase Plan, Phase 2 Demolition



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-7d. Phase Plan, Phase 2 Construction



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2-7e. Phase Plan Completion

2.6 Consultation with California Native American Tribe(s)

At the time CAL FIRE was ready to initiate CEQA review, it had received written requests to receive Project notices from one California Native American Tribe in the region. The Mechoopda Indian Tribe of Chico Rancheria identified itself as being traditionally and culturally affiliated with the lands subject to CAL FIRE jurisdiction for this Project. On January 27, 2021, DGS and CAL FIRE determined that it had a complete Project Description and was ready to begin review under CEQA. On the same day, CAL FIRE sent an initial notification letter to the tribe with Project information and an invitation to consult on the Project. CAL FIRE requested a response to the offer to consult within 30 days of the receipt of the letter. In accordance with Section 21080.3.1(d) of the PRC, a response to the offer to consult was requested by February 26, 2021. No response from the tribe was received; therefore, no tribal consultation was initiated.

2.6.1 Summary of Non-AB 52 Tribal Outreach

On January 27, 2021, CAL FIRE sent notification letters to tribes on a standing outreach list maintained by CAL FIRE. The letters were sent to the following tribes:

- Berry Creek Rancheria of Maidu Indians
- Butte Tribal Council
- Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Greenville Rancheria of Maidu Indians
- Maidu Cultural and Development Group
- Mooretown Rancheria of Maidu Indians
- Each letter was sent with project information and an invitation to comment on the Project. CAL FIRE requested responses to the offer to consult within 30 days of the receipt of the letter. One response was received from Mooretown Rancheria of Maidu Indians. The resulting coordination is outlined below.

2.6.1.1 Mooretown Rancheria of Maidu Indians

On February 23, 2021, Mooretown Rancheria of Maidu Indians sent formal response to CAL FIRE via email. The tribe acknowledged receipt of CAL FIRE's offer to comment on the Project, and stated that after reviewing the information provided, the Mooretown Rancheria is not aware of any known cultural resources in the Project area. They did request that they be notified if any new information or human remains are found as the Project progresses. Further coordination or consultation was not requested or initiated with the Mooretown Rancheria of Maidu Indians for this Project.

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

Environmental Factors Potentially Affected

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

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

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.	☐

Matthew Reischman, Deputy Director
Resource Management

Date

THIS PAGE INTENTIONALLY LEFT BLANK

4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

Butte County is primarily rural with a landscape that reflects its agricultural heritage. There are significant areas left as open space and used for agricultural purposes. Unique land forms in Butte County include the steep river canyons of the mountain and foothill areas, such as Feather River Canyon, Chico Canyon, and Butte Creek Canyon. Table Mountain, a plateau of ancient volcanic rock located just north of Oroville, and the smaller steep-sided buttes in the Lime Saddle area give a signature character to the foothill area in the heart of the county, and various peaks throughout the eastern portion of the county, including Big Bar Mountain, Bald Rock Dome, and Sugarloaf, provide identifiable landmarks. As noted above, the Sutter Buttes, while located outside of Butte County, are important regional landscape forms because they can be seen from across the entire length of the county. Additionally, Mount Shasta, Mount Lassen, and the Coast Range can be seen from many portions of the county (Butte County General Plan Draft EIR 2010).

Magalia is located in the northern part of Butte County, on the western edge of the Plumas National Forest and near the southern tip of the Lassen National Forest. Paradise Lake is the prominent water feature in the locale, and Little Butte Creek feeds Magalia Reservoir from the lake just south of the Project site. Magalia is largely rural residential and open, featuring some small parks and campsites. The aesthetic setting of the area south and west of the Project site is a dense forest, with residential, retail, and public small buildings lining narrow roads nestled between the trees. Paradise Lake and the Plumas National Forest occupy the less-developed areas north and east of the Project site.

4.1.1.1 Visual Character of the Project Site

As discussed in the Project Description, the Project site is located at 6640 Steiffer Road in Magalia, Butte County. The 84.1-acre site is located adjacent to Paradise Lake; however, the Proposed Project involves work on approximately 39.39 acres within the most heavily developed portions of the site. The Project site is bounded to the west and south by heavily forested land and to the north and east by Paradise Lake. Additionally, there are some rural residences to the east south and west. Most of the existing facility is located 1,000 feet or more from the water's edge. The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. Existing vegetation is varied and includes grasslands, barren areas, and heavily forested areas.

881 trees are projected to be removed prior to the start of the Project demolition and construction. The largest trees will be preserved wherever possible, but fuel load reduction is necessary to improve site fire defensibility. A THP will be prepared to evaluate the tree removal.

4.1.2 Regulatory Setting

4.1.2.1 State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. State Route (SR) 70 from Oroville through the junction at SR 89 is the only portion of State Scenic Highway designated as eligible in the county. SR 70 runs approximately 7.5 miles southeast of the Project site as the crow flies.

4.1.3 Aesthetics (I) Environmental Checklist and Discussion

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

No impact.

The Project site is not within a designated scenic vista. **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
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐

Less than significant impact.

The Project site is located at the end of Steiffer Road in Magalia, Butte County. Approximately 881 trees would be removed in accordance with a CAL FIRE THP in order to improve site defensibility against wildfire and to accommodate site development. The Project site is frequented only by CAL FIRE and CCC staff and is not a public throughway that allows public viewing of scenic resources in the area. The Project would not substantially damage scenic resources within a State scenic highway viewshed; there are no designated state scenic highways in the vicinity (Caltrans 2020a). A **less than significant** impact would occur and no mitigation is required.

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.

See response to b), above. The Project site is zoned Public and is located at an existing CAL FIRE/CCC fire center. The Proposed Project will look similar to the existing use, with some new buildings in different positions within the developed area and the removal of approximately 881 trees in the immediate vicinity of the fire center. Single-family residential homes exist along Imperial Way, which runs parallel to Steiffer Road, approximately 1,500 feet south of the Project site. Views from these homes would not be affected because all tree removal is proposed north and northwest of an existing clearing currently used as a staging area by the BFC (Figure 2-4 shows existing staging area). The Project would not conflict with applicable zoning or scenic quality regulations as a State project on State-owned land. A **less than significant** impact would occur and no mitigation is required.

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.

The Project site is in a heavily forested area. The Proposed Project would not increase the total number of buildings onsite, but would provide new site lighting throughout, including new road identification sign lighting. This development is expected to improve nighttime visibility onsite. However, day- and nighttime views would not be adversely affected in the surrounding area. As stated above, the Project area currently operates as a fire center and emergency response station. This function would remain the same after the Proposed Project is completed. **No impact** would occur and no mitigation is required.

4.1.4 Mitigation Measures

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

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

Plumas, Butte, Lassen, Sierra, and Yuba counties are home to the Plumas National Forest, which spans 1,146,000 acres of mountain lands in the northern Sierra Nevada, primarily in Plumas County. Management of the Plumas National Forest has been the responsibility of the U.S. Forest Service (USFS) since the Forest was established by President Theodore Roosevelt in 1905. Situated in the Sierra Nevada, just south of the Cascade Range, the Plumas is versatile in its land features, uncrowded, and pleasant climate. Outdoor enthusiasts are attracted year round to its many streams and lakes, deep canyons, mountain valleys, meadows, and lofty peaks. The Plumas extends from the foothill country near Lake Oroville through heavily timbered slopes and into the rugged high country near U.S. Highway 395. SR 70 between Oroville and U.S. Highway 395 provides year round access, and SR 89 provides connections through Tahoe (USFS 2021).

Walnuts are the top agricultural product from the County, accounting for 31 percent of total agricultural financial production value. Fruit and nut crops contributed $410 million of the $688 million total agricultural and timber production in 2019. Field crops were the next largest contributor, providing an additional 26 percent of the agricultural and timber revenue. (Butte County 2021). There are no agricultural uses in the general vicinity of the Project site.

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

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

No impact.

The California Department of Conservation (DOC) manages the Farmland Mapping and Monitoring Program, which identifies and maps significant farmland. Farmland is classified using a system of five categories including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The classification of farmland as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS, DOC 2017a). DOC manages an interactive website called the California Important Farmland Finder. This program identifies the Project site as being urban and built-up land, and therefore is not considered to be agriculturally important land [DOC 2017b]. Additionally, the land surrounding the Project site is classified as Other Land. There would be **no impact**.

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 site is zoned Public in the Butte County Zoning Ordinance. This zoning designation is not intended for agricultural uses. The DOC also maintains mapping for Williamson Act contracts by county. As shown on the map for Butte County, the site is not subject to a Williamson Act contract (Butte County 2016). Therefore, the Proposed Project would result in **no impact** to Williamson Act contract lands or land zoned for agricultural uses. No mitigation is required.

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

No impact.

The Project site is zoned Public; the fire center will continue to protect and serve the Butte Unit upon Project completion. Approximately 881 trees in the immediate vicinity of the Project improvement area would be removed as part of a THP prior to Project construction in order to improve site defensibility against wildfire and accommodate site improvements. There would not be any rezoning or removal of forested land outside of the Public zoning designation. There would be **no impact** and no mitigation is required.

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?	☐	☐	☒	☐

Less than significant impact.

The Proposed Project would remove approximately 881 trees in accordance with a THP, which would be approved by the CAL FIRE Redding Regional Office. Trees to be removed would be harvested in the Public-zoned area located entirely within the Project site. Tree removal is required to reduce wildfire

hazard to the Project site and accommodate site improvements. Impacts would be **less than significant** and no mitigation is required.

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 forestland to non-forest use?	☐	☐	☐	☒

No impact.

See answers to a-d, above. The Project takes place entirely onsite and requires no improvement or expansion of auxiliary offsite facilities; therefore, the Project has no foreseeable indirect, offsite, or cumulative impacts that could degrade or convert forestlands or agricultural lands. After implementation of the THP and Proposed Project, the BFC will be better equipped to respond to fires and emergencies in the CAL FIRE Butte Unit. There would be **no impact**.

4.2.3 Mitigation Measures

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

4.3 Air Quality

4.3.1 Environmental Setting

The Project area is located in Butte County. The California Air Resources Board (CARB) has divided California into regional air basins according to topographic features. The Project area is located within the Northern Sacramento Valley Air Basin (NSVAB). The local air quality agency affecting the NSVAB is the Butte County Air Quality Management District (BCAQMD), which is charged with the responsibility of implementing air quality programs.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project area.

Both the U.S. Environmental Protection Agency (USEPA) and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called *criteria* pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (precursor emissions include nitrogen oxide [NO_x] and reactive organic gases [ROG]), carbon monoxide (CO),

particulate matter (PM), nitrogen dioxide (NO_2), 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.

Toxic Air Contaminants (TAC) are separated into categories of carcinogens and noncarcinogens. Carcinogens, such as diesel particulate matter (DPM), are considered dangerous at any level of exposure. Noncarcinogens, however, have a minimum threshold for dangerous exposure. Common sources of TACs include, but are not limited to gas stations, dry cleaners, diesel generators, ships, trains, construction equipment, and motor vehicles.

4.3.2 Regulatory Setting

4.3.2.1 Ambient Air Quality

The USEPA and CARB designate air basins or portions of air basins and counties as being in *attainment* or *nonattainment* for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than ozone (O_3), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O_3, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the NSVAB is included in Table 4.3-1**.**

Table 4.3-1. Attainment Status of Criteria Pollutants in the Butte County Portion of the NSVAB

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Nonattainment	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: CARB 2019

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O_3 standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ (CARB 2019).

4.3.2.2 Local Quality Management

Butte County Air Quality Management District

The BCAQMD is the air pollution control agency for Butte County, including the Project site. 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.

Following is a list of noteworthy BCAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 200 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 201 (Visible Emissions)**- This rule prohibits the discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

  a) as dark or darker in shade as that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
  b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (A) of this section.

- **Rule 207 (Particulate Matter)**- This rule prohibits the release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of 0.1 grains per cubic foot of dry exhaust gas at standard conditions.
- **Rule 205 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
b) All onsite roads will be paved as soon as feasible or watered periodically or chemically stabilized.
c) All material transported offsite will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

- **Rule 230 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

4.3.2.3 Thresholds of Significance

The significance criteria established by the applicable air quality management or air pollution control district (BCAQMD) may be relied upon to make the above determinations. According to the BCAQMD, an air quality impact is considered significant if the Proposed Project contributes substantially to an existing or projected air quality violation or exposes sensitive receptors to substantial pollutant concentrations. The BCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 4.3-2.

Table 4.3-2. BCAQMD Regional Significance Thresholds

Air Pollutant	Construction Activities		Operations
	Pounds Per Day	Tons Per Year	
ROG	137	4.5	25
CO	-	-	-
NO_x	137	4.5	25
SO_2	-	-	-
PM_{10}	80	-	80
$PM_{2.5}$	-	-	-

Source: BCAQMD 2014

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

4.3.3 Air Quality (III.) Environmental Checklist and Discussion

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

No impact.

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

The *2018 Air Quality Attainment Plan* constitutes the current SIP for the Butte County portion of the NSVAB and is the most recent air quality planning document covering Butte County. Air quality attainment plans are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards. State law makes CARB the lead agency for all purposes related to the *Air Quality Attainment Plan*. Local air districts prepare air quality attainment plans and submit them to CARB for review and approval. The *2018 Air Quality Attainment Plan* includes forecast ROG and NO_X emissions (O_3 precursors) for the entire NSVAB through the year 2020. The plan also includes control strategies necessary to attain the California O_3 standard at the earliest practicable date, as well as developed emissions inventories and associated emissions projections for the region showing a downtrend for both ROG and NO_X.

The consistency of the Project with the *2018 Air Quality Attainment Plan* is determined by Project-induced development's consistency with air pollutant emission projections in the plan. The *2018 Air Quality Attainment Plan* is based on information derived from projected growth in Butte County in order to project future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Butte County. As such, projects that propose development consistent with the growth anticipated by the respective general plan and zoning classification of the jurisdiction in which the proposed development is located would be consistent with the *2018 Air Quality Attainment Plan*. In the event that a project would propose a development that is less dense than that associated with the general plan and zoning code, the project would likewise be consistent with the *Air Quality Attainment Plan*. If a project, however, proposes a development that is denser than that assumed in the general plan and zoning code, the project may be in conflict with the *Air Quality Attainment Plan* and could therefore result in a significant impact on air quality.

The Project is proposing the demolition and reconstruction of numerous buildings and associated features at the BFC for use by the CCC and CAL FIRE. The Project thus is consistent with the County General Plan land use designation as there are no proposed changes in land uses, and therefore would not exceed the population or job growth projections used by the BCAQMD to develop its air quality attainment plans. Additionally, as shown in Tables 4.3-3 and 4.3-4, both Project construction and Project operations would not generate emissions that would exceed BCAQMD significance thresholds, which were established to achieve national air quality standards.

Table 4.3-3. Construction-Related Emissions

Construction Activity	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Pounds Per Day						
Construction & Timber Harvest in 2023	10.95	64.92	61.98	0.20	21.46	11.43
Construction & Timber Harvest in 2024	15.99	59.24	80.26	0.16	24.69	13.06
BCAQMD Daily Significance Threshold	*137*	*137*	-	-	*80*	-
Exceed BCAQMD Daily Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Tons per Year						
Construction in 2023	0	2	3	0	0	0
Construction in 2024	0	3	4	0	0	0
BCAQMD Annual Significance Threshold	4.5	4.5	-	-	-	-
Exceed BCAQMD Annual Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2020.4.0. Refer to *Appendix B* for Model Data Outputs.
Notes: Construction, paving, and painting are assumed to occur simultaneously. Daily construction emissions taken from the season (summer or winter) with the highest output.

Table 4.3-4. Operational-Related Emissions

Emission Source	Pollutant (pounds per day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Existing Baseline Emissions						
Area	2.45	0.01	0.91	0.00	0.00	0.00
Energy	0.02	0.22	0.18	0.00	0.01	0.01
Mobile	0.71	1.16	5.85	0.00	0.78	0.21
Total						
Project Operational Emissions						
Area	2.42	0.01	1.34	0.00	0.00	0.00
Energy	0.03	0.28	0.22	0.00	0.02	0.02
Mobile	0.65	0.80	5.09	0.00	0.90	0.24
Total	**3.1**	**1.09**	**6.65**	**0.00**	**0.92**	**0.26**

Emission Source	Pollutant (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Emissions Difference from Baseline						
Area	0.00	0.00	+0.43	0.00	0.00	0.00
Energy	+0.01	+0.06	+0.04	0.00	+0.01	+0.01
Mobile	-0.06	-0.36	-0.76	0.00	+0.12	+0.03
Total	**-0.05**	**-0.30**	**+0.29**	**0.00**	**+0.13**	**+0.04**
BCAQMD Significance Threshold	*25*	*25*	*-*	*-*	*80*	*-*
Exceed BCAQMD Regional Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod version 2020.4.0. Refer to *Appendix B* for Model Data Outputs.
Notes: Automobile emissions projections account for an automotive trip generation rate identified in the Project Description. Operational emissions taken from the season (summer or winter) with the highest output.

Thus, the Project would be consistent with the emission-reduction goals of the BCAQMD Attainment Plans. **No impact** would occur.

Would the project	Potentially Significant Impact	Less Than Significant Impact 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.

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

Implementation of the Proposed Project could result in air quality impacts during Project construction and operation.

4.3.3.1 Construction Emissions

Construction Significance Analysis

Construction associated with the Proposed Project would generate short-term emissions of criteria air pollutants, including ROGs, CO, NO_X, PM_{10}, and $PM_{2.5}$. The largest amount of ROG, CO, and NO_X emissions would occur during the earthwork phase. PM_{10} and $PM_{2.5}$ emissions would occur from fugitive dust (due to earthwork and excavation) and from construction equipment exhaust. Exhaust emissions from

construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced onsite as the equipment is used, and emissions from trucks transporting materials to and from the site. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved California Emissions Estimator Model (CalEEMod) computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. The Project is proposing the timber harvest of 881 trees as well as the demolition and reconstruction of multiple buildings onsite. Construction will be done in two phases with an anticipated start date of May 2023. See *Appendix B – CalEEMod Emissions Modeling* (ECORP 2021a) for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

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

As shown in Table 4.3-3, emissions generated during Project construction would not exceed the BCAQMD's thresholds of significance. Therefore, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard and no health risks would occur. A **less than significant** impact would occur as a result of construction of the Proposed Project.

4.3.3.2 Operational Emissions

As described in the Project Description, the Project proposes upgrades to the existing BFC which includes the demolition and reconstruction of associated facilities and structures. For the purposes of this analysis, projected operational emissions associated with proposed operations are compared to the existing baseline of the BFC.

Operational Criteria Air Quality Emissions

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM_{10}, $PM_{2.5}$, CO, and SO_2 as well as O_3 precursors such as ROG and NO_X. Operational-generated emissions associated with the Proposed Project were calculated using CalEEMod. As previously described, the Project is proposing upgrades to the existing BFC.

Long-term operational emissions attributable to the Project are identified in Table 4.3-4 and compared to the existing baseline. The difference in daily criteria air pollutant emissions are compared to the significance thresholds promulgated by the BCAQMD.

As shown in Table 4.3-4, emissions from the proposed new structures and associated features are similar to emissions currently being generated by the existing onsite structures, which are proposed for

replacement. Project emissions would not exceed BCAQMD significance thresholds for operational air pollutant emissions. A **less than significant** impact would occur as a result of operations of the Proposed Project.

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

Less than significant impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the Project site are rural single-family residences with the closest being approximately 200 feet distant from the southern Project site boundary.

4.3.3.3 Short-Term Construction Impacts

Construction-related activities would result in temporary, short-term Project-generated emissions of DPM, ROG, NO_X, CO, and PM_{10} from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; and other miscellaneous activities. The portion of the NSVAB that encompasses the Project area is designated as a nonattainment area for federal O_3 and standards and is also a nonattainment area for the state standards for O_3, PM_{10}, and $PM_{2.5}$ (CARB 2019). Thus, existing O_3, PM_{10}, and $PM_{2.5}$ levels in the Butte County portion of the NSVAB are at unhealthy levels during certain periods. However, as shown in Table 4.3-4, the Project would not exceed the BCAQMD construction emission thresholds, which were established to protect the public health and welfare.

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

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

PM_{10} and $PM_{2.5}$ contain microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. PM exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary TAC of concern. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Based on the emission modeling conducted, the maximum onsite construction-related daily emissions of exhaust PM_{10}, considered a surrogate for DPM and includes emissions of exhaust $PM_{2.5}$, would be a maximum of 2.54 and 2.43 pounds per day in construction years 2023 and 2024, respectively (*Appendix B*). PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM. As with O_3 and NO_X, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the BCAQMD's thresholds. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, the Project would not result in a potentially significant contribution to regional or localized concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. As such, the impact would be **less than significant**.

4.3.3.4 Operational Impacts

The Project is proposing the demolition of a 390-sf fueling station and the reconstruction of a hazardous materials building and fueling station with fuel tank. This area would include a 3,000-gallon split fuel tank, storing 1,000 gallons of gasoline and 2,000 gallons of diesel. The hazardous materials building would be split into three rooms, consisting of a bulk fluids room that would store 55-gallon drums and a torch storage room. The hazardous materials building and fuel tank would be located just southeast of the new apparatus buildings. The fuel onsite would be used for fueling various pieces of equipment used by CAL FIRE and the CCC. Gasoline vapors, including benzene, are released during the filling of stationary underground storage tanks and during the transfer from those underground tanks to individual pieces of equipment. Benzene is highly carcinogenic and occurs throughout California. According to the California Air Pollution Control Officers Association (CAPCOA), benzene is the most important substance driving cancer risk, while xylene, another air pollutant associated with gasoline dispensing, is the only substance which is associated with acute adverse health effects (CAPCOA 1997). CARB's Air Quality and Land Use Handbook (2005) offers guidance on developing gasoline dispensing facilities in proximity to sensitive land uses. The handbook recommends that *typical* gas stations be sited no closer than 50 feet from a sensitive land use, and *large gas stations*, defined as a facility with a throughput of 3.6 million gallons per year or greater, be sited no closer than 300 feet from a sensitive land use. The nearest offsite sensitive receptors to the hazardous materials building and fuel tank is a rural residence located to the south approximately 800 feet distant. Furthermore, a review of the Project's Site plan shows that the existing and proposed onsite barracks are located more than 700 feet from the nearest gasoline dispenser. The Project would not be a substantial source of operational air contaminants. As such, a **less than significant** impact would occur.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or *hot spots*, are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. In 1993, much of the state was designated nonattainment under the CAAQS and NAAQS for CO. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams per mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration across the entire state is now designated as attainment. Detailed modeling of Project-specific CO "hot spots" is not necessary and thus this potential impact is addressed qualitatively.

A CO *hot spot* would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. A study conducted in Los Angeles County by the South Coast Air Quality Management District (SCAQMD) is helpful in showing the amount of traffic necessary to result in a CO Hotspot. The SCAQMD analysis prepared for CO attainment in the SCAQMD's *1992 Federal Attainment Plan for Carbon Monoxide* in Los Angeles County, and a Modeling and Attainment Demonstration prepared by the SCAQMD as part of the *2003 Air Quality Management Plan*, can be used to demonstrate the potential for CO exceedances of these standards. The SCAQMD conducted a CO hot spot analysis as part of the 1992 CO Federal Attainment Plan at four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. Despite this level of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992). To establish a more accurate record of baseline CO concentrations affecting the South Coast Air Basin, a CO *hot spot* analysis was conducted in 2003 at the same four busy intersections in Los Angeles at the peak morning and afternoon time periods. This *hot spot* analysis did not predict any violation of CO standards. The highest one-hour concentration was measured at 4.6 ppm at Wilshire Boulevard and Veteran Avenue and the highest eight-hour concentration was measured at 8.4 ppm at Long Beach Boulevard and Imperial Highway.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase

traffic volumes at a single intersection by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

Approximately 135 trips are anticipated to be generated per day from the Proposed Project (80 CCC members, 22 CCC Staff and 33 CAL FIRE Staff). Thus, the Project would not generate traffic volumes at any intersection of more than 100,000 vehicles per day (or even 44,000 vehicles per hour); there is no likelihood of the Project traffic exceeding CO values. As such, a **less than significant** impact would occur.

Would the Project:	Potentially Significant Impact	Less Than Significant Impact 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 words *strong* or *pungent* to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the Proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources.

Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not expose a substantial number of people to odor emissions.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (e.g., 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 of these uses identified as being associated with odors. As such, **no impact** would occur.

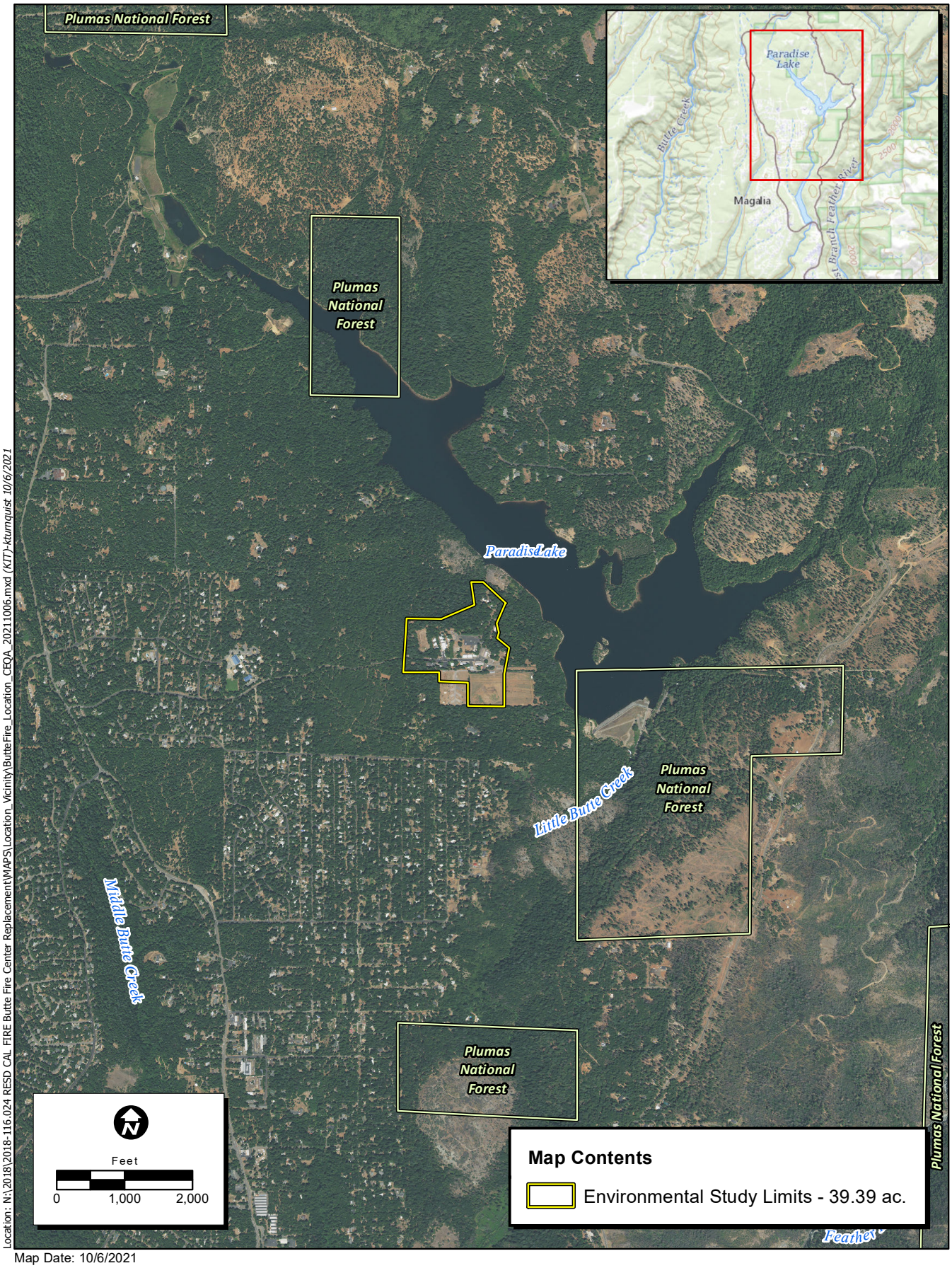
4.3.4 Mitigation Measures

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

4.4 Biological Resources

This section is based on the analysis and recommendations presented in the *Biological Resources Assessment* (BRA) prepared for the Proposed Project (ECORP 2021b, *Appendix C*). The purpose of this section is to assess the potential for occurrence of special-status plant and animal species or their habitats and sensitive habitats such as wetlands, riparian communities, and sensitive natural communities within the Study Area. The Study Area is defined as the environmental study limits within the Project site (Figure 4.4-1). Project site disturbance will only occur on a maximum of 39.39 acres within the 84.1-acre Project site, and the limits of that work were considered when defining the Study Area.

This assessment in this section and the BRA include information generated from literature review and an assessment-level reconnaissance site visit. The BRA does not include determinate field surveys for plant and animal species, nor does it include an aquatic resources delineation performed according to U.S. Army Corps of Engineers (USACE) protocol.



Location: N:\2018\2018-116.024 RESD CAL FIRE Butte Fire Center Replacement\MAPS\Location_Vicinity\ButteFire_Location_CEQA_20211006.mxd (KT)-kturnquist 10/6/2021

Map Date: 10/6/2021
Sources: ESRI, USGS, Butte County, NAIP (2020)

Figure 4.4-1. Study Area Location and Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

For the purposes of this assessment, special-status species are defined as plants or animals that:

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- are identified as a species of special concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as birds of conservation concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" [California Rare Plant Rank (CRPR) 1 and 2] ", "plants about which more information is needed" (i.e., species with a CRPR of 3), or "plants of limited distribution – a watch list" (i.e., species with a CRPR of 4);
- are plants listed as rare under the California Native Plant Protection Act (NPPA, California Fish and Game Code, § 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, §§ 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

Only species that fall into one of the above-listed groups were considered for this assessment. While other species (i.e., special-status lichens, California Natural Diversity Database- (CNDDB) tracked species with no special status) are sometimes found in database searches or within the literature, these species were not included within this analysis.

Field Survey

The BRA includes an initial site visit to generally characterize onsite resources, including plant communities, wildlife, special-status species, and sensitive natural communities. A preliminary aquatic resources (i.e., potential Waters of the U.S./State) assessment was conducted during this site visit. No other focused technical studies specific to the Study Area have been completed to date.

A field assessment for special-status species and sensitive habitats was conducted by ECORP biologist Keith Kwan on February 5, 2021. The purpose of this assessment was to identify potential biological resources constraints (e.g., aquatic resources, special-status species) onsite, identify regulatory requirements for development of the site, and assess potential mitigation needs. The following biological resource information was collected during the assessment:

- Direct observations of special-status species;
- Animal and plant species directly observed;
- Habitat and vegetation communities; and

- Identification of aquatic resources.

The preliminary aquatic resources assessment was based on visual assessment and did not include field data collection in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) or the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain, Valleys, and Coast Region* (USACE 2010).

Literature Review

The following resources were queried to determine the special-status species that had been documented within or in the vicinity of the Study Area:

- CDFW CNDDB data for the "Paradise East, California" 7.5-minute U.S. Geological Survey (USGS) quadrangle and the eight surrounding USGS quadrangles (CDFW 2021a).
- USFWS Information, Planning, and Consultation System Resource Report List for the Study Area (USFWS 2021b).
- CNPS' electronic Inventory of Rare and Endangered Plants of California for the "Paradise East, California" 7.5-minute USGS quadrangle and the eight surrounding USGS quadrangles (CNPS 2021).

The results of the database queries are included in Attachment A of *Appendix C*.

4.4.1 Environmental Setting

4.4.1.1 Existing Site

The Study Area is located at the eastern end of Steiffer Road, approximately 3 miles north of the town of Magalia. It is known as the Butte Fire Center and is within Assessor's Parcel Number 064-260-010-000. The Study Area is located on sloped terrain above the shoreline of Paradise Lake and is situated at an elevational range of approximately 2,600 to 2,700 feet above mean sea level (amsl) at the interface of the Sierra Nevada Foothills and the High Sierra Nevada Subregions of the Sierra Nevada floristic region of California (Baldwin et al. 2012). Most of the existing facility is located 1,000 feet or more from the water's edge. The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. The Study Area is made up of developed CAL FIRE and CCC facilities and the surrounding undeveloped coniferous forest. The developed lands onsite include paved surfaces, roads, living quarters, buildings, landscaping, native trees along fence lines and boundaries, and a large mown grassy area used for temporary housing for firefighters. The surrounding undeveloped lands are comprised of coniferous forest. The average winter low temperature is 39.9 degrees Fahrenheit (˚F) and the average summer high temperature is 88.6˚F in Paradise, California approximately 6 miles south of the Study Area; the average annual precipitation is approximately 58.13 inches (National Oceanic and Atmospheric Administration 2021).

4.4.1.2 Vegetation Communities

The only vegetation community found outside of the developed portions of the Study Area is *Pinus ponderosa-Calocedrus decurrens* Forest and Woodland Alliance (mixed conifer forest and woodland) (Figure 4.4-2) and is not considered a sensitive natural community (G4/S4) by CDFW. This vegetation community is comprised of codominant trees including incense cedar (*Calocedrus decurrens*) and ponderosa pine (*Pinus ponderosa*), with scattered white fir (*Abies concolor*), Douglas fir (*Pseudotsuga menziesii*), and black oak (*Quercus kelloggii*). The herbaceous understory is comprised of a variety of grasses and forbs. Most of the herbaceous plants in the understory were unidentifiable at the time of the site visit. Other plants found in the understory of the mixed conifer forest include licorice fern (*Polypodium calirhiza*), manzanita (*Arctostaphylos* species), and Himalayan blackberry (*Rubus armeniacus*).

4.4.1.3 Wildlife Observations, Movement Corridors, and Nursery Sites

The developed portions of the Study Area are subject to constant levels of disturbance from the presence of people and vehicle traffic throughout the year, with periods of intense activity during the wildland fire season.

The Study Area is located in an area that has not been identified as winter deer herd range or critical winter deer herd range according to the *Butte County General Plan 2030* (Butte County 2012). Nevertheless, tracks from transient deer were found onsite during the site visit. Other mammal sign observed included broad-footed mole (*Scapanus latimanus*) diggings.

A variety of bird species were observed in the Study Area during the site visit in February 2021, including Anna's hummingbird (*Calypte anna*), hairy woodpecker (*Dryobates villosus*), common raven (*Corvus corax*), ruby-crowned kinglet (*Corthylio calendula*), red-breasted nuthatch (*Sitta canadensis*), and dark-eyed junco (*Junco hyemalis*). While the CAL FIRE and CCC facilities are highly disturbed throughout the year, some nesting bird activity is expected in trees and shrubs onsite and in close proximity to the Study Area.

4.4.1.4 Soils

According to the Web Soil Survey (NRCS 2021a), three soil units, or types, have been mapped within the Study Area (Figure 4.4-3):

- 814 – Mountyana gravelly loam, 2 to 15 percent slopes,
- 829 – Paradiso loam, 2 to 15 percent slopes, and
- 832 – Surnuf-Bigridge-Spine complex, 15 to 30 percent slopes

Map Features

Environmental Study Limits - 39.39 ac.

Land Cover Type

Disturbed/Developed - 23.3 ac.

Mixed Conifer Forest - 13.1 ac.

Sources: ESRI, USGS, NMR, NAIP (2020)

ECORP: N:\2018\2018-116.024 RESD CAL FIRE Butte Fire Center Replacement\MAPS\Vegetation_and_LandCover\ButteFire_LandCover_20210210.mxd (KT) kturnquist 3/1/2021

Map Date: 2/10/2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 200

Figure 4.4-2. Land Cover Types

2018-116.024 Butte Fire Center Replacement

Figure 4.4-3. Natural Resources Conservation Service Soil Types

Map Features

Environmental Study Limits - 39.39 ac.

Series Number - Series Name

814 - Mountyana gravelly loam, 2 to 15 percent slopes

829 - Paradiso loam, 2 to 15 percent slopes

832 - Surnuf-Bigridge-Spine , 15 to 30 percent slopes

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Butte County, CA

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Location: N:\2018\2018-116.024 RESD CAL FIRE Butte Fire Center Replacement\MAPS\Soils_and_Geology\ButteFire_Soils.aprx ()-kturnquist 2/10/2021

Photo (or Base) Source: NAIP 2020

Map Date: 2/10/2021

Scale in Feet
0 250

2018-116.024 Butte Fire Center Replacement

None of these soil units are derived from serpentinite or other ultramafic parent materials. 814-Mountyana gravelly loam formed in fine-loamy residuum weathered from volcanic breccia. 829-Paradiso loam formed in clayey residuum weathered from volcanic rocks. 832-Surnuf-Bigridge-Spine complex formed in silty and clayey colluvium or residuum weathered from metavolcanic rocks (NRCS 2021a). None of these soil units are hydric or contain hydric components or inclusions (NRCS 2021b).

4.4.1.5 Aquatic Resources

A preliminary aquatic resources assessment to identify potential Waters of the U.S./State was conducted onsite concurrent with the BRA site visit. One aquatic resource was identified; a detention basin located in the western portion of the Study Area. The existing detention basin was excavated on sloped terrain and completed with a constructed earthen berm. No other wetlands or other aquatic resources were found onsite (Figure 4.4-4). Based on the current definition of waters of the U.S. under the Navigable Waters Protection Rule and waters of the state under the *State Wetland Definition* and *Procedures for Discharges of Dredged or Fill Material to Waters of the State* (SWRCB 2019), the detention pond does not appear to be a water of the U.S. or state. However, USACE and Regional Water Quality Control Board (RWQCB) verification is required to make this determination.

4.4.1.6 Evaluation of Potentially Occurring Special-Status Species

Table 4.4-1 lists all the special-status plant and wildlife species identified in the literature review as potentially occurring within the Study Area. Included in this table is the listing status for each species, a brief habitat description, and a determination on the potential to occur within the Study Area. Following the table is a brief description and discussion of each special-status species that is known to occur in the Study Area (from the literature review) or is considered to potentially occur within the Study Area. Each of the species that were considered as potentially occurring within the Study Area or vicinity was evaluated based on the following criteria:

- **Present** - Species was observed during field surveys or is known to occur within the Study Area based on documented occurrences within the CNDDB or other literature.
- **Potential to Occur** - Habitat (including soils and elevation requirements) for the species occurs within the Study Area.
- **Low Potential to Occur** - Marginal or limited amounts of habitat occur, or the species is not known to occur within the vicinity of the Study Area based on CNDDB records and other available documentation.
- **Absent** - No suitable habitat (including soils and elevation requirements), or the species is not known to occur within the Study Area or the vicinity of the Study Area based on CNDDB records and other documentation or determinate field surveys.

Map Features

Environmental Study Limits - 39.39 ac.

Aquatic Resources

Detention Pond

Sources: NAIP 2020

Other Related Info if Needed

Map Date: 8/17/2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 300

Figure 4.4-4. Preliminary Aquatic Resources Assessment

2018-116.024 Butte Fire Center Replacement

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Plants						
Henderson's bent grass (*Agrostis hendersonii*)	–	–	3.2	Vernal pools and mesic areas in valley and foothill grasslands (230'–1,001').	April–June	Absent-there is no suitable habitat onsite.
Jepson's onion (*Allium jepsonii*)	–	–	1B.2	Serpentinite or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests (984'–4,331').	April–August	**Potential-there is suitable habitat onsite.**
Sanborn's onion (*Allium sanbornii* var. *sanbornii*)	–	–	4.2	Chaparral, cismontane woodland, and lower montane coniferous forests, usually with gravelly, serpentinite soils (853'–4,954').	May–September	**Low potential-there is marginally suitable habitat (gravelly soils in coniferous forest) onsite.**
True's manzanita (*Arctostaphylos mewukka* ssp. *truei*)	–	–	4.2	Chaparral and lower montane coniferous forest, sometimes on roadsides (1,394'–4,560').	February–July	**Potential-there is suitable habitat onsite.**
Carlotta Hall's lace fern (*Aspidotis carlotta-halliae*)	–	–	4.2	Usually, serpentine soils in chaparral and cismontane woodland (328'–4,593').	January–December	Absent-there is no suitable habitat onsite.
Depauperate milk-vetch (*Astragalus pauperculus*)	–	–	4.3	Vernally mesic, volcanic soils in chaparral, cismontane woodland, and valley and foothill grassland (196'–3,986').	March–June	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Scalloped moonwort (*Botrychium crenulatum*)	–	–	2B.2	Bogs and fens, meadows and seeps, and freshwater marshes and swamps within lower montane coniferous forest and upper montane coniferous forest (4,160'–10,761').	June–September	Absent-the site is outside of elevational range for this species and does not have suitable habitat.
Mingan moonwort (*Botrychium minganense*)	–	–	2B.2	Mesic areas of bogs and fens, lower montane coniferous forests, edges of meadows and seeps, and upper montane coniferous forests (4,773'–7,152')	July–September	Absent-the site is outside of elevational range for this species and does not have suitable habitat.
Western goblin (*Botrychium montanum*)	–	–	2B.1	Mesic areas of bogs and fens, lower montane coniferous forests, and upper montane coniferous forests (4,806'–7,153')	July–September	Absent-the site is outside of elevational range for this species and does not have suitable habitat.
Valley brodiaea (*Brodiaea rosea* ssp. *vallicola*)	–	–	4.2	Occurs in old alluvial terraces and silt, sandy, or gravelly soils in vernal pools and swales within valley and foothill grassland (33'–1,100').	April–May	Absent-there is no suitable habitat onsite.
Sierra foothills brodiaea (*Brodiaea sierrae*)	–	–	4.3	Usually found on serpentinite or gabbroic soils within chaparral or cismontane woodland (164'–3,215').	May–August	**Low potential-there is marginally suitable habitat (coniferous forest) onsite.**
Thread-leaved beakseed (*Bulbostylis capillaris*)	–	–	4.2	Lower montane coniferous forest, meadows and seeps, and upper montane coniferous forest (1,296'–6,808').	June–August	**Potential-there is suitable habitat onsite.**

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Callahan's mariposa-lily (*Calochortus syntrophus*)	-	-	1B.1	Cismontane woodland and vernally mesic valley and foothill grassland (1,722'–3,757').	May-June	**Potential-there is suitable habitat onsite.**
Butte County calycadenia *Calycadenia oppositifolia*)	-	-	4.2	Occurs on volcanic, granitic, and serpentinite areas of chaparral, cismontane woodland, lower montane coniferous forest, meadows, seeps and valley and foothill grassland. (295'-3,100')	April - July	**Potential-there is suitable habitat onsite.**
Butte County morning-glory (*Calystegia atriplicifolia* ssp. *buttensis*)	–	–	4.2	Rocky substrates and sometimes roadsides in chaparral, lower montane coniferous forest, and valley and foothill grassland (1,853'–5,000').	May–July	**Potential-there is suitable habitat onsite.**
Dissected-leaved toothwort (*Cardamine pachystigma* var. *dissectifolia*)	–	–	1B.2	Usually, rocky serpentinite substrates in chaparral and lower montane coniferous forest (836'–6,890').	February–May	Absent-there is no suitable habitat onsite.
Chaparral sedge (*Carex xerophila*)	–	–	1B.2	Serpentinite or gabbroic soils within chaparral, cismontane woodland, and lower montane coniferous forest (1,444'–2,526').	March–June	Absent-there is no suitable habitat onsite.
Pink creamsacs (*Castilleja rubicundula* var. *rubicundula*)	–	–	1B.2	Serpentinite substrates in chaparral openings, cismontane woodland, meadows and seeps, and valley and foothill grassland (66'–2,986').	April–June	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
White-stemmed clarkia (*Clarkia gracilis* ssp. *albicaulis*)	–	–	1B.2	Sometimes serpentinite substrates in chaparral and cismontane woodland (803'–3,560').	May–July	**Low potential-there is marginally suitable habitat (coniferous forest) onsite.**
Golden-anthered clarkia (*Clarkia mildrediae* ssp. *lutescens*)	–	–	4.2	Often roadsides and rocky substrates in cismontane woodland, and lower montane coniferous forest openings (902'–5,741').	June–August	**Potential-there is suitable habitat onsite.**
Mildred's clarkia (*Clarkia mildrediae* ssp. *mildrediae*)	–	–	1B.3	Sandy, usually granitic substrates of cismontane woodland and lower montane coniferous forest (803'–5,611').	May–August	Absent-there is no suitable habitat onsite.
Mosquin's clarkia (*Clarkia mosquinii*)	–	–	1B.1	Rocky substrates and roadsides in cismontane woodland and lower montane coniferous forest (606'–4,889').	May–July	**Potential-there is suitable habitat onsite.**
Marsh claytonia *(Claytonia palustris*)	–	–	4.3	Meadows and seeps (mesic), marshes and swamps, and upper montane coniferous forest (3,280'–8,202').	May–October	Absent-the site is outside of elevational range for this species.
Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora)*	–	–	4.2	Occurs in rocky cismontane woodland (820'–3,937').	February–May	**Low potential-there is marginally suitable habitat (gravelly soils in coniferous forest) onsite.**

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
California lady's-slipper (*Cypripedium californicum*)	–	–	4.2	Usually within serpentinite seeps and streambanks of bogs and ferns, and lower montane coniferous forest (98'–9,022').	April–August	Absent-there is no suitable habitat onsite.
Clustered lady's-slipper (*Cypripedium fasciculatum*)	–	–	4.2	In serpentinite seeps, and streambanks of lower montane coniferous forest, and North Coast coniferous forest (328'–7,989').	March–August	Absent-there is no suitable habitat onsite.
Clifton's eremogone (*Eremogone cliftonii*)	–	–	1B.3	Usually granitic openings in chaparral, lower montane coniferous forest, and upper montane coniferous forest (1,492'–6,825').	April–September	Absent-there is no suitable habitat onsite.
Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*)	–	–	4.3	Sometimes serpentinite substrates in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest (984'–6,801').	June–October	**Low potential-there is marginally suitable habitat (volcanic soils in coniferous forest) onsite.**
Ahart's buckwheat (*Eriogonum umbellatum* var. *ahartii*)	–	–	1B.2	Serpentinite substrates, slopes, and openings in chaparral, cismontane woodland (1,312'–6,562').	June–September	**Potential-there is suitable habitat onsite.**
Slender cottongrass (*Eriophorum gracile*)	–	–	4.3	Acidic wetlands in bogs and fens, meadows and seeps, and lower montane coniferous forest (4,199'–9,515').	May–September	Absent-the site is outside of elevational range for this species and does not have suitable habitat.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Fern-leaved monkeyflower (*Erythranthe filicifolia*)	–	–	1B.2	Usually slow-draining, ephemeral seeps among exfoliating granitic slabs in chaparral, lower montane coniferous forest, and ephemeral meadows and seeps (1,361'–5,611').	April–June	Absent-there is no suitable habitat onsite.
Shield-bracted monkeyflower (*Erythranthe glaucescens*)	–	–	4.3	Serpentine seeps and sometimes streambanks of chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland (196'–4,069').	February–August	Absent-there is no suitable habitat onsite.
Small–flowered monkeyflower (*Erythranthe inconspicua*)	–	–	4.3	Mesic. Chaparral, cismontane woodland and lower montane coniferous forest (899'–2,493').	May–June	**Low potential-there is marginally suitable habitat (detention basin) onsite.**
Hoover's spurge (*Euphorbia hooveri*)	FT	–	1B.2	Vernal pools (82'–821').	July–September	Absent-there is no suitable habitat onsite.
Caribou coffeeberry (*Frangula purshiana* ssp. *ultramafica*)	–	–	1B.2	Serpentinite substrates in chaparral, lower montane coniferous forest, meadows and seeps, and upper montane coniferous forest (2,706'–6,333').	May–July	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Butte County fritillary (*Fritillaria eastwoodiae*)	–	–	3.2	Chaparral, cismontane woodland, and openings in lower montane coniferous forest and occasionally is found on serpentinite soils (164'–4,921').	March–June	**Potential-there is suitable habitat onsite.**
Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*)	–	–	4.3	Serpentinite or Ione cismontane woodland (1,050'–2,001').	May–June	Absent-there is no suitable habitat onsite.
Hogwallow starfish (*Hesperevax caulescens*)	–	–	4.2	Sometimes alkaline in mesic areas with clay soil within valley and foothill grassland and shallow vernal pools (0'–1,657').	March–June	Absent-there is no suitable habitat onsite.
Baker cypress (*Hesperocyparis bakeri*)	–	–	4.2	Serpentinite or volcanic substrates of chaparral and lower montane coniferous forest (2,690'–6,545').	Any season	Absent-there is no suitable habitat onsite.
Woolly rose-mallow (*Hibiscus lasiocarpos* var. *occidentalis*)	–	–	1B.2	Marshes and freshwater swamps. Often in riprap on sides of levees (0'–423').	June–September	Absent-the site is outside of elevational range for this species.
California satintail (*Imperata brevifolia*)	–	–	2B.1	Mesic areas in chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub (0'–3,986').	September - May	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*)	–	–	1B.1	Vernally mesic areas in chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools (115'–4,101').	March–June	**Low potential-there is marginally suitable habitat (detention basin) onsite.**
Colusa layia (*Layia septentrionalis*)	–	–	1B.2	Sandy or serpentinite soils in chaparral, cismontane woodland, and valley and foothill grasslands (328'–3,593').	April–May	Absent-there is no suitable habitat onsite.
Serpentine leptosiphon (*Leptosiphon ambiguus*)	–	–	4.2	Usually serpentinite soils of Cismontane woodland, coastal scrub, and valley and foothill grassland (395'–3710').	March–June	Absent-there is no suitable habitat onsite.
Cantelow's lewisia (*Lewisia cantelovii*)	–	–	1B.2	In granitic or sometimes serpentinite soils within mesic areas of broad–leaved upland forest, chaparral, cismontane woodland, and lower montane coniferous forest (1,083'–4,495').	May–October	Absent-there is no suitable habitat onsite.
Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*)	–	–	4.2	Occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (295'–4,199').	May–August	**Potential-there is suitable habitat onsite.**
Veiny monardella (Monardella venosa)	–	–	1B.1	Heavy clay soils in cismontane woodland and valley and foothill grasslands (197'–1,345').	May–July	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Tehama navarretia (*Navarretia heterandra*)	–	–	4.3	Mesic areas in valley and foothill grassland and vernal pools (98'–3,314').	April–June	Absent-there is no suitable habitat onsite.
Lewis Rose's ragwort (*Packera eurycephala* var. *lewisrosei*)	–	–	1B.2	Serpentinite substrates in chaparral, cismontane woodland, and lower montane coniferous forest (898'–6,201').	March–July	Absent-there is no suitable habitat onsite.
Closed-throated beardtongue (*Penstemon personatus*)			1B.2	Metavolcanic substrates in lower montane coniferous forest and upper montane coniferous forest ('1,065'–6,956').	June–September	Absent-there is no suitable habitat onsite.
Bacigalupi's yampah (*Perideridia bacigalupii*)	–	–	4.2	Serpentinite soils of lower montane coniferous forest and chaparral (1,476'–3,396').	June–August	Absent-there is no suitable habitat onsite.
Coleman's rein orchid (*Piperia colemanii*)	–	–	4.3	Sandy soils in chaparral and lower montane coniferous forest (3,937'–7,546').	June–August	Absent-there is no suitable habitat onsite.
Sierra blue grass (*Poa sierrae*)	–	–	1B.3	Lower montane coniferous forest openings (1,198'–4,921').	April–July	**Potential-there is suitable habitat onsite.**
Bidwell's knotweed (*Polygonum bidwelliae*)	–	–	4.3	Volcanic substrates in chaparral, cismontane woodland, and valley and foothill grassland (196'–3,974').	April–July	**Potential-there is suitable habitat onsite.**
California beaked-rush (*Rhynchospora californica*)	–	–	1B.1	Bogs and fens, lower montane coniferous forest, meadows and seeps, and freshwater marshes and swamps (148'–3,314').	May–July	**Low potential-there is marginally suitable habitat (detention basin) onsite.**

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Brownish beaked-rush (*Rhynchospora capitellata*)	–	–	2B.2	Mesic areas in lower montane coniferous forest, upper montane coniferous forests, meadows, seeps, marshes, and swamps (148'–6,562').	July–August	**Low potential-there is marginally suitable habitat (detention basin) onsite.**
Hall's rupertia (*Rupertia hallii*)	–	–	2B.2	Often roadsides and sometimes openings in cismontane woodland and lower montane coniferous forest (1,788'–7,382').	June–August	Potential-there is suitable habitat onsite.
Sanford's arrowhead (*Sagittaria sanfordii*)	–	–	1B.2	Shallow marshes and freshwater swamps (0'–2,133').	May–October	**Low potential-there is marginally suitable habitat (detention basin) onsite.**
Feather River stonecrop (*Sedum albomarginatum*)	–	–	1B.2	Serpentinite substrates in chaparral and lower montane coniferous forest (853'–6,398').	May–June	Absent-there is no suitable habitat onsite.
Giant checkerbloom (*Sidalcea gigantea*)	–	–	4.3	Meadows and seeps within lower and upper montane coniferous forests (2,198'–6,398').	January–June	Absent-there is no suitable habitat onsite.
Butte County checkerbloom (*Sidalcea robusta*)	–	–	1B.2	Chaparral and cismontane woodland (295'–5,250').	April–June	**Potential-there is suitable habitat onsite.**
Obtuse starwort (*Stellaria obtusa*)	–	–	4.3	Mesic areas and streambanks of lower montane coniferous forest, riparian woodland, and upper montane coniferous forest (492'–7,513').	May–September	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Sickle-fruit jewelflower (*Streptanthus drepanoides*)	–	–	4.3	Serpentine soils of chaparral, cismontane woodland, and lower montane coniferous forest (902'–5,447').	April–June	Absent-there is no suitable habitat onsite.
Long-fruit jewelflower (*Streptanthus longisiliquus*)	–	–	4.3	Openings in cismontane woodland and lower montane coniferous forest (2,346'–4,921').	April–September	**Potential-there is suitable habitat onsite.**
Greene's tuctoria (*Tuctoria greenei*)	FE	CR	1B.1	Vernal pools (98'–3,510').	May–July	Absent-there is no suitable habitat onsite.
Felt-leaved violet (*Viola tomentosa*)	–	–	4.2	Gravelly soils in lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest (4,708'–6,562').	May–October	Absent-there is no suitable habitat onsite.
Invertebrates						
Crotch bumble bee (*Bombus crotchii*)	-	CC	-	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico.	March - September	Absent-there is no suitable habitat onsite.
Western bumble bee (*Bombus occidentalis*)	-	CC	-	Meadows and grasslands with abundant floral resources. Primarily nests underground. Largely restricted to high elevation sites in the Sierra Nevada, although rarely detected on the California coast.	April - November	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Conservancy fairy shrimp (*Branchinecta conservatio*)	FE	-	-	Vernal pools/wetlands.	November-April	Absent-there is no suitable habitat onsite.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	-	-	Elderberry shrubs.	Any season	Absent-there is no suitable habitat onsite.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	-	-	Vernal pools/wetlands.	November-April	Absent-there is no suitable habitat onsite.
Fish						
Delta smelt (*Hypomesus transpacificus*)	FT	CE	-	Sacramento-San Joaquin delta.	N/A	Absent-The Study Area is outside of the known distribution of this species.
Chinook salmon (Central Valley spring-run ESU) (*Oncorhynchus tshawytscha*)	FT	CT	-	Undammed rivers, streams, creeks.	N/A	Absent-there is no suitable habitat onsite.
Hardhead (*Mylopharodon conocephalus*)	-	-	SSC	Relatively undisturbed streams at low to mid elevations in the Sacramento-San Joaquin and Russian River drainages. In the San Joaquin River, scattered populations found in tributary streams, but only rarely in the valley reaches of the San Joaquin River.	N/A	Absent-there is no suitable habitat onsite.
Steelhead (CA Central Valley Distinct Population Segment) (*Oncorhynchus mykiss*)	FT	-	-	Undammed rivers, streams, creeks.	N/A	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Amphibians						
California red-legged frog (*Rana draytonii*)	FT	-	SSC	Lowlands or foothills at waters with dense shrubby or emergent riparian vegetation. Adults must have aestivation habitat to endure summer dry down.	May 1-November 1	Absent-there is no suitable habitat onsite.
Foothill yellow-legged frog Feather River Clade (*Rana boylii*)	-	CT	SSC	Foothill yellow-legged frogs can be active all year in warmer locations but may become inactive or hibernate in colder climates. At lower elevations, foothill yellow-legged frogs likely spend most of the year in or near streams. Adult frogs, primarily males, will gather along main-stem rivers during spring to breed.	May - October	Absent-there is no suitable habitat onsite.
Cascades frog (*Rana cascadae*)	-	CC	SSC	Inhabits small streams, small pools in meadows, lakes, bogs, ponds, and marshy areas near streams in open coniferous forests to timberline. Occurs in areas covered by snow.	As snow melts	Absent-there is no suitable habitat onsite.
Western spadefoot (*Spea hammondii*)	-	-	SSC	California endemic species of vernal pools, swales, wetlands and adjacent grasslands throughout the Central Valley.	March-May	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Reptiles						
Blainville's ("Coast") horned lizard (*Phrynosoma blainvillii*)	-	-	SSC	Formerly a wide-spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Requires open areas for basking, but with bushes or grass clumps for cover, patches of loamy soil or sand for burrowing and an abundance of ants (Stebbins and McGinnis 2012).	Apr-Oct	Absent-there is no suitable habitat onsite.
Northwestern pond turtle (*Actinemys marmorata*)	-	-	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches.	April-September	Absent-there is no suitable habitat onsite.
Birds						
California black rail (*Laterallus jamaicensis coturniculus*)	-	CT	BCC, CFP	Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer, El Dorado counties)	March-September (breeding)	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Osprey (*Pandion haliaetus*)	-	-	CDFW WL	Nesting habitat requires close proximity to accessible fish, open nest site free of mammalian predators, and extended ice-free season. The nest in large trees, snags, cliffs, transmission/ communication towers, artificial nest platforms, channel markers/buoys.	April-September	Low potential-marginal nesting habitat is present onsite.
Sharp-shinned hawk (*Accipiter striatus*)	-	-	CDFW WL	Nests in trees in most forest types with at least some conifers. In California, nesting occurs in Sierra Nevada and Cascade ranges (foothills to tree line) and northwestern coastal range.	April-August	Potential-nesting habitat is present onsite.
Cooper's hawk (*Accipiter cooperii*)	-	-	CDFW WL	Nests in trees in riparian woodlands in deciduous, mixed and evergreen forests, as well as urban landscapes	March-July	Potential-nesting habitat is present onsite.
Northern goshawk (*Accipiter gentilis*)	-	-	SSC	Nesting occurs in mature to old-growth forests composed primarily of large trees with high canopy closure. In California, nests are built primarily in conifer trees in the Sierra Nevada, Cascade and northwestern coastal ranges.	March-August	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Bald eagle (*Haliaeetus leucocephalus*)	De-listed	CE	CFP, BCC	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands	February – September (nesting); October-March (wintering)	Low potential-marginal nesting habitat is present onsite.
American peregrine falcon (*Falco peregrinus anatum*)	De-listed	De-listed	BCC, CFP	In California, breeds in coastal region, northern California, and Sierra Nevada. Nesting habitat includes cliff ledges and human-made ledges on towers and buildings. Wintering habitat includes areas where there are large concentrations of shorebirds, waterfowl, pigeons or doves.	CA Residents nest in February-June	Absent-there is no suitable habitat onsite.
Olive-sided flycatcher (*Contopus cooperi*)	-	-	SSC, BCC	Nests in montane and northern coniferous forests, in forest openings, forest edges, semi-open forest stands. In California, nests in coastal forests, Cascade and Sierra Nevada region.	May-August	Potential-nesting habitat is present onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Oak titmouse (*Baeolophus inornatus*)	-	-	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines, and Joshua tree)	March-July	Potential-nesting habitat is present onsite.
Tricolored blackbird (*Agelaius tricolor*)	-	CT	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields.	March-August	Absent-there is no suitable habitat onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Black-throated gray warbler (*Setophaga nigrescens*)	-	-	BCC	Breeding habitat includes open coniferous or mixed coniferous-deciduous woodland with brushy undergrowth, pinyon-juniper and pine-oak associates, and oak scrub. Their deep cup nests are often built on horizontal branches and constructed of a variety of plant material, feathers, and mammal fur (Guzy and Lowther 2020).	May-July	Potential-suitable nesting habitat is present.
Mammals						
Pallid bat (*Antrozous pallidus*)	-	-	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (Western Bat Working Group [WBWG] 2021).	April-September	Potential-suitable roosting habitat is present onsite.

Table 4.4-1. Potentially Occurring Special-Status Species

Common Name (Scientific Name)	Status			Habitat Description	Survey Period	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other			
Western red bat (*Lasiurus blossevillii*)	-	-	SSC	Roosts in foliage of trees or shrubs; Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2021).	April-September	Potential-suitable roosting habitat is present onsite.
Sierra Nevada mountain beaver (*Aplodontia rufa californica*)	-	-	SSC	Found around swift-flowing streams bordered by riparian vegetation. Colonial and nocturnal.	Any season	Absent-there is no suitable habitat onsite.

Status Codes:

FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
NPPA	California Native Plant Protection Act
FE	FESA listed, Endangered.
FT	FESA listed, Threatened.
BCC	USFWS Bird of Conservation Concern
CR	CESA- or NPPA-listed, Rare.
CT	CESA- or NPPA-listed, Threatened.
CC	Candidate for CESA listing as Endangered or Threatened.
CE	CESA or NPPA listed, Endangered.
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5 050-reptiles/amphibians).
CDFW WL	CDFW Watch List
SSC	CDFW Species of Special Concern (CDFW, updated July 2017).
1B	CRPR/Rare or Endangered in California and elsewhere.
2B	Plants rare, threatened, or endangered in California but more common elsewhere.
3	CRPR/Plants About Which More Information is Needed – A Review List.
4	CRPR/Plants of Limited Distribution – A Watch List.
0.1	Threat Rank/Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)
Delisted	Formally Delisted (delisted species are monitored for 5 years).

Plants

A total of 66 special-status plants have been identified as potentially occurring for this the Study Area based on the initial literature review and database queries (Table 4.4-1). However, it was determined that 40 of the plant species were absent due to a lack of suitable habitat onsite or the plant is not known to occur at the elevation of the Study Area. No further discussion of these species is included in the report. Among the 26 special-status plants with potential to occur, the existing detention basin onsite represents potentially suitable habitat for five plants and the mixed conifer forest onsite represents suitable or marginally suitable habitat for 20 special-status plants. A brief description of the remaining special-status plants that have the potential to occur within the Study Area is presented below.

Jepson's Onion

Jepson's onion (*Allium jepsonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species (CNPS 2021). This species is a bulbiferous herbaceous perennial that occurs on serpentinite or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests (CNPS 2021). Jepson's onion blooms from April through August and is known to occur at elevations ranging from 984 to 4,331 feet amsl (CNPS 2021). Jepson's onion is endemic to California; the current range of this species includes Butte, El Dorado, Placer, and Tuolumne counties (CNPS 2021).

There are eight documented CNDDB occurrences of Jepson's onion within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Sanborn's Onion

Sanborn's onion (*Allium sanbornii* var. *sanbornii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a bulbiferous herbaceous perennial that usually occurs on serpentinite or gravelly soils in chaparral, cismontane woodlands, and lower montane coniferous forest (CNPS 2021). Sanborn's onion blooms from May through September and is known to occur at elevations ranging from 853 to 4,954 feet amsl (CNPS 2021). The current range of this species in California includes Butte, Calaveras, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne, and Yuba counties (CNPS 2021).

There are no documented CNDDB occurrences of Sanborn's onion within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides marginally suitable habitat for this species.

True's Manzanita

True's manzanita (*Arctostaphylos mewukka* ssp. *truei*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an evergreen, perennial shrub that occurs sometimes on roadsides of chaparral and lower montane coniferous forest (CNPS 2021). True's manzanita blooms from February through July and is known to occur at elevations ranging from 1,394 to 4,560 feet amsl (CNPS 2021). True's manzanita is endemic to California; the current range of this species includes Butte, El Dorado, Nevada, Placer, Plumas, and Yuba counties (CNPS 2021).

There are no documented CNDDB occurrences of True's manzanita within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Sierra Foothills Brodiaea

Sierra foothills brodiaea (*Brodiaea sierrae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species (CNPS 2021). This species is a perennial bulbiferous herb that occurs usually in serpentinite or gabbroic soils in cismontane woodland, lower montane coniferous forest, or chaparral (CNPS 2021). Sierra foothill brodiaea blooms from May through August and is known to occur at elevations ranging from 164 to 3,215 feet amsl (CNPS 2021). Sierra foothill brodiaea is endemic to California; the current range of this species includes Butte, Nevada, and Yuba counties (CNPS 2021).

There are no documented CNDDB occurrences of Sierra foothills brodiaea within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Thread-leaved Beakseed

Thread-leaved beakseed (*Bulbostylis capillaris*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species (CNPS 2021). This species is an herbaceous annual that occurs in lower and upper montane coniferous forest, as well as in meadows and seeps (CNPS 2021). Thread-leaved beakseed blooms from June through August and is known to occur at elevations ranging from 1,296 to 6,808 feet amsl (CNPS 2021). The current range for thread-leaved beakseed in California includes Alpine, Butte, Fresno, Mariposa, Nevada, Plumas, Shasta, Sierra, Tehama, and Tuolumne counties (CNPS 2021).

There are no documented CNDDB occurrences of three-leaved beakseed within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Callahan's Mariposa Lily

Callahan's mariposa lily (*Calochortus syntrophus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is a perennial bulbiferous herb that occurs in cismontane woodland and valley and foothill grassland (CNPS 2021). Callahan's mariposa lily blooms from May through June and is known to occur at elevations ranging from 1,722 to 3,757 feet amsl (CNPS 2021). This species is endemic to California; the current range includes Butte. Shasta, and Tehama counties (CNPS 2021).

There are no documented CNDDB occurrences of Callahan's mariposa lily within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Butte County Calycadenia

Butte County calycadenia (*Calycadenia oppositifolia*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs on volcanic, granitic, and serpentinite areas of chaparral, cismontane woodland, lower montane coniferous forest, meadows, seeps, and valley and foothill grassland (CNPS 2021). Butte County calycadenia blooms

from April through July and is known to occur at elevations ranging from 295 to 3,100 feet amsl (CNPS 2020). This species is endemic to California; the current range includes Butte County (CNPS 2021).

There are no documented CNDDB occurrences of Butte County calycadenia within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Butte County Morning-glory

Butte County morning-glory (*Calystegia atriplicifolia* ssp. *buttensis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species (CNPS 2021). This species is a rhizomatous herbaceous perennial that occurs on rocky soils, sometimes roadsides, in chaparral, lower montane coniferous forests, and valley and foothill grassland (CNSP 2021). Butte County morning-glory blooms from May through July and is known to occur at elevations ranging from 1,853 to 5,000 feet amsl (CNPS 2021). Butte County morning-glory is endemic to California; the current range of this species includes Butte, Del Norte, Mendocino, Shasta (uncertain), and Tehama counties (CNPS 2021).

There are 34 documented CNDDB occurrences of Butte County morning-glory within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

White-stemmed Clarkia

White-stemmed clarkia (*Clarkia gracilis* ssp. *albicaulis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species (CNPS 2021). This species is an herbaceous annual that sometimes occurs on serpentinite soils in chaparral and cismontane woodland (CNPS 2021). White-stemmed clarkia blooms from May through July and is known to occur at elevations ranging from 804 to 3,560 feet amsl (CNPS 2021). White-stemmed clarkia is endemic to California; the current range of this species includes Butte and Tehama counties (CNPS 2021).

There are three documented CNDDB occurrences of white-stemmed clarkia within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides marginally suitable habitat for this species.

Golden-anthered Clarkia

Golden-anthered clarkia (*Clarkia mildrediae* ssp. *lutescens*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species (CNPS 2021). This species is an herbaceous annual that occurs on rocky, often roadcuts, soils in cismontane woodland and lower montane coniferous forest openings (CNSP 2021). Golden-anthered clarkia blooms from June through August and is known to occur at elevations ranging from 902 to 5,741 feet amsl (CNPS 2021). Golden-anthered clarkia is endemic to California; the current range of this species includes Butte, Plumas, Sierra, and Yuba counties (CNPS 2021).

There are no documented CNDDB occurrences of golden-anthered clarkia within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Mosquin's Clarkia

Mosquin's clarkia (*Clarkia mosquinii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species (CNPS 2021). This species is an herbaceous annual that occurs on rocky, often roadsides, soils in cismontane woodland and lower montane coniferous forests (CNSP 2021). Mosquin's clarkia blooms from May through July and is known to occur at elevations ranging from 607 to 4,888 feet amsl (CNPS 2021). Mosquin's clarkia is endemic to California; the current range of this species includes Butte, Plumas, and Yuba counties (CNPS 2021).

There is one documented CNDDB occurrences of Mosquin's clarkia within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Streambank Spring Beauty

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in rocky soils within cismontane woodland (CNPS 2021). Streambank spring beauty blooms from February through May and is known to occur at elevations ranging from 820 to 3,937 feet amsl (CNPS 2020). Streambank spring beauty is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Placer, Tulare, and Tuolumne counties (CNPS 2021).

There are no documented CNDDB occurrences of streambank spring beauty within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides marginally suitable habitat for this species.

Northern Sierra Daisy

Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a rhizomatous herbaceous perennial that sometimes occurs in serpentinite soils of cismontane woodland as well as lower and upper montane coniferous forest (CNPS 2021). Northern Sierra daisy blooms from June through October and is known to occur at elevations ranging from 984 to 6,801 feet amsl (CNPS 2021). Northern Sierra daisy is endemic to California and is known to occur in Butte, El Dorado, Nevada, Plumas, Sierra, and Yuba counties (CNPS 2021).

There are no documented CNDDB occurrences of northern Sierra daisy within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides marginally suitable habitat for this species.

Ahart's Buckwheat

Ahart's buckwheat (*Eriogonum umbellatum* var. *ahartii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species (CNPS 2021). This species is an herbaceous perennial that occurs on serpentinite soils on slopes and openings in chaparral and cismontane woodland (CNSP 2021). Ahart's buckwheat blooms from June through September and is known to occur at elevations ranging from 1,312 to 6,562 feet amsl (CNPS 2021). Ahart's buckwheat is endemic to California; the current range of this species includes Butte, Plumas, Sierra, and Yuba counties (CNPS 2021).

There are six documented CNDDB occurrences of Ahart's buckwheat within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Small-flowered Monkeyflower

Small-flowered monkeyflower (*Erythranthe inconspicua*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous annual that occurs in mesic sites such as chaparral, cismontane woodland, and lower montane coniferous forest (CNPS 2021). Small-flowered monkeyflower blooms from May through June and is known to occur at elevations ranging from 899 to 2,493 feet amsl (CNPS 2021). Small-flowered monkeyflower is endemic to California; its current range includes Amador, Butte, Calaveras, Fresno, Mariposa, and Tuolumne counties (CNPS 2021).

There are no documented CNDDB occurrences of small-flowered monkeyflower within 5 miles of the Study Area (CDFW 2021a). The detention basin within the Study Area provides marginally suitable habitat for this species.

Butte County Fritillary

Butte County fritillary (*Fritillaria eastwoodiae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.2 species. This species is an herbaceous bulbiferous perennial that occurs in chaparral, cismontane woodland, and lower montane coniferous forest, and is occasionally found on serpentinite soils (CNPS 2021). Butte County fritillary blooms from March through June and is known to occur at elevations ranging from 164 to 4,921 feet amsl (CNPS 2021). The current range of this species in California includes Butte, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, and Yuba counties (CNPS 2021).

There are 27 documented CNDDB occurrences of Butte County fritillary within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Red Bluff Dwarf Rush

Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernally mesic areas in chaparral, cismontane woodland, meadows, seeps, valley and foothill grasslands, and vernal pools (CNPS 2021). Red Bluff dwarf rush blooms from March through June and is known to occur at elevations ranging from 115 to 4,101 feet amsl (CNPS 2021). Red Bluff dwarf rush is endemic to California; the current range of this species includes Butte, Placer, Shasta, and Tehama counties (CNPS 2021).

There are no documented CNDDB occurrences of Red Bluff dwarf rush within 5 miles of the Study Area (CDFW 2021a). The detention basin within the Study Area provides marginally suitable habitat for this species.

Humboldt Lily

Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest (CNPS 2021). Humboldt lily blooms from May through August and is known to occur at elevations ranging from 295 to 4,199 feet amsl (CNPS 2021). Humboldt lily is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Mariposa, Nevada, Placer, Tehama, Tuolumne, and Yuba counties (CNPS 2021).

There are no documented CNDDB occurrences of Humboldt lily within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Sierra Blue Grass

Sierra blue grass (*Poa sierrae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.3 species. This species is a rhizomatous herbaceous perennial that occurs in lower montane coniferous forest openings (CNPS 2021). Sierra blue grass blooms from April through July and is known to occur at elevations ranging from 1,198 to 4,921 feet amsl (CNPS 2021). Sierra blue grass is endemic to California; its current range includes Butte, El Dorado, Madera, Nevada, Placer, Plumas, and Shasta counties (CNPS 2021).

There are no documented CNDDB occurrences of Sierra blue grass within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Bidwell's Knotweed

Bidwell's knotweed (*Polygonum bidwelliae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous annual that occurs on volcanic soils in chaparral, cismontane woodland, and valley and foothill grasslands (CNPS 2021). Bidwell's knotweed blooms from April through July and is known to occur at elevations ranging from 197 to 3,937 feet amsl (CNPS 2021). Bidwell's knotweed is endemic to California; its current range includes Butte, Shasta, and Tehama counties (CNPS 2021).

There are no documented CNDDB occurrences of Sierra blue grass within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

California Beaked-rush

California beaked-rush (*Rhynchospora californica*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. This species is a rhizomatous herbaceous perennial that occurs in bogs and fens, lower montane coniferous forest, meadows and seeps, and marshes and swamps (CNPS 2021). California beaked-rush blooms from May through July and is known to occur at elevations ranging from 148 to 3,314 feet amsl (CNPS 2021). California beaked-rush is endemic to California; its current range includes Butte, Marin, Napa, and Sonoma counties (CNPS 2021).

There are no documented CNDDB occurrences of Sierra blue grass within 5 miles of the Study Area (CDFW 2021a). The detention basin within the Study Area provides marginally suitable habitat for this species.

Brownish Beaked-rush

Brownish beaked-rush (*Rhynchospora capitellata*) 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 perennial that occurs in mesic areas in lower montane coniferous forest, meadows, seeps, marshes, swamps, and upper montane coniferous forest (CNPS 2021). Brownish beaked-rush blooms from July through August and is known to occur at elevations ranging from 148 to 6,562 feet amsl (CNPS 2021). The current range of this species in California includes Butte, El Dorado, Mariposa, Nevada, Plumas, Sonoma, Tehama, Trinity, Tuolumne, and Yuba counties; distribution or identity is uncertain in Sonoma County, but it is presumed extirpated if it was once present there (CNPS 2021).

There are no documented CNDDB occurrences of Sierra blue grass within 5 miles of the Study Area (CDFW 2021a). The detention basin within the Study Area provides marginally suitable habitat for this species.

Hall's Rupertia

Hall's rupertia (*Rupertia hallii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.2 species. This species is a herbaceous perennial that occurs in often on roadsides and sometimes openings in cismontane woodland and lower montane coniferous forest (CNPS 2021). Hall's rupertia blooms from June through August and is known to occur at elevations ranging from 1,788 to 7,382 feet amsl (CNPS 2021). Hall's rupertia is endemic to California; its current range includes Butte and Tehama counties (CNPS 2021).

There are no documented CNDDB occurrences of Sierra blue grass within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial rhizomatous herb that occurs in shallow, freshwater marshes and swamps (CNPS 2021). Sanford's arrowhead blooms from May through October, and is known to occur at elevations ranging from sea level to 2,133 feet amsl (CNPS 2021). Sanford's arrowhead is endemic to California; the current range of this species includes Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, San Joaquin, Shasta, Solano, Tehama, Tulare, Ventura, and Yuba counties; it is believed to be extirpated from both Orange and Ventura counties (CNPS 2021).

There are no documented CNDDB occurrences of Sanford's arrowhead within 5 miles of the Study Area (CDFW 2021a). The detention basin within the Study Area provides marginally suitable habitat for this species.

Butte County Checkerbloom

Butte County checkerbloom (*Sidalcea robusta*) is not listed pursuant to the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial rhizomatous herb that occurs in chaparral and cismontane woodland (CNPS 2021). Butte County checkerbloom blooms from April through June, and is known to occur at elevations ranging from 295 to 5,250 feet amsl (CNPS 2021). Butte County checkerbloom is endemic to California; the current range of this species includes Butte County (CNPS 2021).

There are no documented CNDDB occurrences of Sanford's arrowhead within 5 miles of the Study Area (CDFW 2021a). The detention basin within the Study Area provides marginally suitable habitat for this species.

Long-fruit Jewelflower

Long-fruit jewelflower (*Streptanthus longisiliquus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous perennial that occurs in openings within cismontane woodland and lower montane coniferous forests (CNPS 2021). Long-fruit jewelflower blooms from April through September and is known to occur at elevations ranging from 2,346 to 4,921 feet amsl (CNPS 2021). Long-fruit jewelflower is endemic to California; the current range of this species in California includes Butte, Shasta, and Tehama counties (CNPS 2021).

There are no documented CNDDB occurrences of Sanford's arrowhead within 5 miles of the Study Area (CDFW 2021a). The mixed conifer forest within the Study Area provides suitable habitat for this species.

Invertebrates

Five special-status invertebrates have been identified as potentially occurring for this the Study Area based on the initial literature review and database queries (Table 4.4-1). However, it was determined that there is no suitable habitat onsite for any of these special-status invertebrates. As such, based on the current Project limits, there are no anticipated impacts to or recommended actions pertaining to special-status invertebrates.

Fish

Four special-status fish were identified as having potential to occur in the Study Area based on the literature review (Table 4.4-1). However, upon further analysis and after the site visit, all of these special-status species were considered absent because Paradise Lake is not located within the Study Area and Paradise Lake Dam represents a fish barrier. As such, based on the current Project limits, there are no anticipated impacts to or recommended actions pertaining to special-status fish.

Amphibians

Four special-status amphibians were identified as having potential to occur in the Study Area based on the literature review (Table 4.4-1). However, upon further analysis and after the site visit, all of these special-status species were considered absent from the site due to the lack of suitable aquatic habitat. As

such, based on the current Project limits, there are no anticipated impacts to or recommended actions pertaining to special-status amphibians.

Reptiles

Two special-status reptiles were identified as having the potential to occur in the Study Area based on the literature review (Table 4-1). However, upon further analysis and after the site visit, both of these special-status species were considered absent from the site due to the lack of suitable habitat. As such, based on the current Project limits, there are no anticipated impacts to or recommended actions pertaining to special-status reptiles.

Birds

A total of 11 special-status bird species were identified as having the potential to occur within the Study Area based on the literature review (Table 4.4-1). However, upon further analysis and after the site visit, four of these species were considered absent from the site due to the lack of suitable habitat or the Study Area is outside the known breeding range of the species. No further discussion of these species is provided in this analysis. A brief description of the remaining seven special-status birds that have the potential to occur within the Study Area is presented below.

Osprey

The osprey (*Pandion haliaetus*) is not listed pursuant to either the California or federal ESAs; however, it is considered a CDFW watch list species. Osprey have expanded their range throughout much of North American (Bierregaard et al. 2020). Breeding habitat requirements include proximity to fish, open nest sites free from predators, and an ice-free fledging season (Bierregaard et al. 2020). Natural nesting sites include live and dead trees, cliffs, shoreline boulders, and on the ground on predator-free islands; they readily use artificial nest sites such as duck-hunting blinds, channel markers, communication towers, and platforms erected for nesting (Bierregaard et al. 2020). Breeding season occurrences of osprey are found throughout California, with highest frequencies found along the northern California coast, northern Sacramento Valley, and the Sierra Nevada (eBird 2021). Breeding occurs from April to September.

There are no CNDDB occurrences of osprey reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within and adjacent to the Study Area could provide nesting habitat for this species, and Paradise Lake represents suitable foraging habitat. However, no osprey nests were observed within or in close proximity to the Study Area during the initial site assessment. Osprey has low potential to occur onsite due to the presence of site disturbances.

Sharp-Shinned Hawk

The sharp-shinned hawk (*Accipiter striatus*) is not listed pursuant to either the California or federal ESAs. However, it is a CDFW *watch list* species and currently tracked in the CNDDB. Their breeding range in California is poorly known but breeding or summering sharp-shinned hawks have occurred throughout the state (Bildstein et al. 2020; Small 1994). They nest in most forest types, particularly dense stands with at least some conifers (Bildstein et al. 2020). Breeding occurs during April through August. The species is a common migrant and winter resident in the Central Valley of California.

There are no CNDDB occurrences of sharp-shinned hawk reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within and adjacent to the Study Area could provide nesting and foraging habitat for this species. Sharp-shinned hawk have potential to nest onsite.

Cooper's Hawk

The Cooper's hawk (*Accipiter cooperii*) is not listed pursuant to either the California or federal ESAs. However, it is a CDFW *watch list* species and is currently tracked in the CNDDB. Typical nesting and foraging habitats include riparian woodland, dense oak woodland, and other woodlands near water. Cooper's hawk nest throughout California from Siskiyou County to San Diego County and includes the Central Valley (Rosenfield et al. 2020). Breeding occurs during March through July, with a peak from May through July.

There are no CNDDB occurrences of Cooper's hawk reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within and adjacent to the Study Area could provide nesting and foraging habitat for this species. Cooper's hawk has potential to nest onsite.

Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) has been delisted under the federal ESA but remains listed as Endangered under the California ESA. It is fully protected pursuant to the California Fish and Game Code Section 3511 and the federal Bald and Golden Eagle Protection Act. It is a USFWS BCC. Bald eagles breed at lower elevations in the northern Sierra Nevada and North Coast ranges. Bald eagles breed in forested areas adjacent to large waterbodies (Buehler 2020). Tree species used for nesting is quite variable and includes conifers (dominant where available), oaks, hickories, cottonwoods, and aspens (Buehler 2020). Nest trees are generally the largest tree available in a suitable area (Buehler 2020). Breeding activity occurs during late-February through September, with peaks in activity from March to June.

There is one CNDDB occurrence of bald eagles reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within adjacent to the Study Area could provide nesting habitat for this species, and the lake represents suitable foraging habitat. However, no bald eagle nests were observed within or in close proximity to the Study Area during the initial site assessment. Bald eagle has low potential to occur onsite due to the presence of site disturbances.

Olive-sided Flycatcher

The olive-sided flycatcher (*Contopus cooperi*) is not listed pursuant to either the California or federal ESAs but is a CDFW SSC and a USFWS BCC. Olive-sided flycatchers breed in the western U.S. from Washington south throughout California, except the Central Valley, eastern deserts, and mountains of southern California (Small 1994). This species breeds in late-successional coniferous forests including Ponderosa pine woodlands, black oak woodlands, mixed coniferous forests, and Jeffrey pine forests, usually at mid to high elevations (Widdowson 2008). They use edges and clearings surrounding dense forests, foraging primarily on bees and wasps. Nesting occurs during May through August.

There are no CNDDB occurrences of olive-sided flycatcher reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within and adjacent to the Study Area could provide nesting and foraging habitat for this species. Olive-sided flycatcher has potential to nest onsite.

Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) are not listed and protected under either the California or federal ESAs but is considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse, and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2020). They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands (Cicero et al. 2020). Nesting occurs during March through July.

There are no CNDDB occurrences of oak titmouse reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within and adjacent to the Study Area could provide nesting and foraging habitat for this species. Oak titmouse has potential to nest onsite.

Black-throated Gray Warbler

Black-throated gray warbler (*Setophaga nigrescens*) is not listed and protected under either the federal or California ESA's; however, it is considered a species of conservation concern according to the USFWS. Their breeding range includes British Columbia south into northern Mexico; In California, present primarily in mountains: Klamath to Warner mountains., n. Coast Ranges south to Sonoma and Napa counties; Santa Cruz Mountains and Diablo Range of Santa Clara County, Oakland hills, Diablo Range south through Santa Barbara and Ventura counties; Cascade and Sierra Nevada ranges south through Piute and Tehachapi mountains; Transverse Ranges, San Jacinto Mountains, Palomar Mountain, Mount Laguna, Cuyamaca Mountains, and possibly Santa Ana Mountains in extreme southwest; White and Inyo mountains, Panamint and Kingston ranges, and New York Mountains in southeast (Guzy and Lowther 2020). Breeding habitat includes open coniferous or mixed coniferous-deciduous woodland with brushy undergrowth, pinyon-juniper and pine-oak associates, and oak scrub (Guzy and Lowther 2020). Their deep cup nests are often built on horizontal branches and constructed of a variety of plant material, feathers, and mammal fur (Guzy and Lowther 2020). Nesting occurs from May through July.

There are no CNDDB occurrences of black-throated gray warbler reported within 5 miles of the Study Area (CDFW 2021a). The trees within the mixed conifer forest within and adjacent to the Study Area could provide nesting and foraging habitat for this species. Black-throated gray warbler has potential to nest onsite.

Migratory Bird Treaty Act Birds

The Study Area supports potential nesting habitat for a variety of common birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code § 3503, among others.

Mammals

Three special-status mammal species were identified as having the potential to occur within the Study Area based on the literature review (Table 4.4-1). However, upon further analysis and after the site visit,

one mammal, the Sierra Nevada mountain beaver (*Aplodontia rufa californica*), was considered to be absent from the site due to the lack of suitable habitat. No further discussion of this species is provided within this assessment. A brief description of the remaining two special-status bat species that have the potential to occur within the Study Area is presented below.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (above 7,000 feet). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges, and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, often they use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2021).

There are no CNDDB occurrences of pallid bat reported within 5 miles of the Study Area (CDFW 2021a). The trees in the mixed conifer forest within and surrounding the Survey Area could support suitable roosting habitat for this species.

Western Red Bat

The western red bat (*Lasiurus blossevillii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed; its range extends from southern British Columbia in Canada through much of the western United States to Argentina and Chile in South America. This solitary species day-roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage one to two hours after sunset. This species is considered highly migratory; however, the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood (WBWG 2021).

There are no CNDDB occurrences of western red bat reported within 5 miles of the Study Area (CDFW 2021a). The trees in the mixed conifer forest within and surrounding the Survey Area could support suitable roosting habitat for this species.

4.4.1.7 Sensitive Natural Communities

The *Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) was used to describe vegetation communities onsite. No sensitive natural communities were identified as having the potential to occur within the vicinity of the Study Area based on the literature review (CDFW 2021a). During the field assessment, no sensitive natural communities were found onsite. No further discussion of sensitive natural communities is provided within this IS/MND.

4.4.2 Regulatory Setting

4.4.2.1 Federal

Federal Endangered Species Act

The ESA protects plants and animals that are listed as endangered or threatened by the USFWS and the National Marine Fisheries Service (NMFS). Section 9 of 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, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging up, damaging, or destroying any listed plant on non-federal land 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 critical habitat. Through consultation and the issuance of a biological opinion (BO), the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a habitat conservation plan is developed.

Section 7

Section 7 of ESA mandates that all federal agencies consult with USFWS or NMFS to ensure that federal agencies' actions do not jeopardize the continued existence of a listed species or adversely modify Critical Habitat for listed species. If direct or indirect effects will occur to Critical Habitat that appreciably diminish the value of Critical Habitat for both the survival and recovery of a species, the adverse modifications will require formal consultation with USFWS or NMFS. If adverse effects are likely, the applicant must conduct a biological assessment (BA) for the purpose of analyzing the potential effects of the project on listed species and critical habitat to establish and justify an *effect determination*. The federal agency reviews the BA; if it concludes that the project may adversely affect a listed species or its habitat, it prepares a BO, which may recommend *reasonable and prudent alternatives* to the project to avoid jeopardizing or adversely modifying habitat.

Critical Habitat and Essential Habitat

Critical Habitat is defined in Section 3 of the ESA as:

1. the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features essential to the conservation of the species and that may require special management considerations or protection; and
2. specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Critical Habitat designations identify, to the extent known and using the best scientific data available, habitat areas that provide essential lifecycle needs of the species. These include but are not limited to the following:

1. Space for individual and population growth and for normal behavior;
2. Food, water, air, light, minerals, or other nutritional or physiological requirements;
3. Cover or shelter;
4. Sites for breeding, reproduction, or rearing (or development) of offspring;
5. Habitats that are protected from disturbance or are representative of the historic, geographical, and ecological distributions of a species;

Migratory Bird Treaty Act

The 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. As authorized under the MBTA, USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (e.g., 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. The State of California has incorporated the protection of non-game birds in § 3800, migratory birds in § 3513, and birds of prey in § 3503.5 of the California Fish and Game Code.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Protection Act) prohibits anyone, without a permit issued by the Secretary of the Interior, from “taking” bald or golden eagles, including their parts (includes feathers), nests, or eggs. The Eagle Protection Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part (includes feathers), nest, or egg thereof." The Eagle Protection Act defines *take* as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb." *Disturb* means: “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or

sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death, or nest abandonment.

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 United States without a permit from the 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 USEPA 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; in California, this certification or waiver is issued by the RWQCB.

Magnuson-Stevens Fishery Conservation and Management Act

The 1996 Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 USC 1801), requires federal agencies to consult with NMFS whenever a proposed action has a potential to adversely affect essential fish habitat (EFH). Although states are not required to consult with NMFS, NMFS is required to develop EFH conservation recommendations for any state agency activities with the potential to affect EFH. EFH is defined as "…those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity" and includes the necessary habitat for managed fish to complete their life cycles and contribute to a sustainable fishery and healthy ecosystem. Although the concept of EFH is similar to the ESA definition of Critical Habitat, measures recommended by NMFS or a regional fisheries management council to protect EFH are advisory, rather than prescriptive.

4.4.2.2 State

California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) protects species of fish, wildlife, and plants listed by the state as endangered or threatened. Species identified as candidates for listing may also receive protection. Section 2080 of the California ESA prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit. 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." The California ESA allows for take incidental to otherwise lawful projects under permits issued by CDFW.

Fully Protected Species

The State of California first began to designate species as *fully protected* prior to the creation of the federal and the 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 federal or California ESAs. Fully protected species are identified in the California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish.

These sections of the California Fish and Game Code provide that fully protected species may not be taken or possessed at any time, including prohibition of CDFW from issuing incidental take permits for fully protected species under the California ESA. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit 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 NPPA of 1977 (California Fish and Game Code §§ 1900-1913) was established with the intent to "preserve, protect and enhance rare and endangered plants in this state." The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as *endangered* or *rare*. The NPPA prohibits the take of plants listed under the NPPA, but the NPPA contains a number of exemptions to this prohibition that have not been clarified by regulation or judicial rule. In 1984, the California ESA brought under its protection all plants previously listed as endangered under NPPA. Plants listed as rare under NPPA are not protected under the California ESA but are still protected under the provisions of NPPA. The Fish and Game Commission no longer lists plants under NPPA, reserving all listings to the California ESA.

California Fish and Game Code Special Protections for Birds

In addition to protections contained within the California ESA and California Fish and Game Code § 3511 described above, the California Fish and Game Code includes a number of sections that specifically protect certain birds:

- Section 3800 states that it is unlawful to take nongame birds, such as those occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds, except when in accordance with regulations of the California Fish and Game Commission or a mitigation plan approved by CDFW for mining operations.
- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 protects birds of prey (which includes eagles, hawks, falcons, kites, ospreys, and owls) and prohibits the take, possession, or destruction of any birds and their nests.

- Section 3505 makes it unlawful to take, sell, or purchase egrets, ospreys, and several exotic nonnative species, or any part of these birds.
- Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA.

Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires individuals or agencies to provide a Notification of Lake or Streambed Alteration (LSA) 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." CDFW reviews the proposed actions and, if necessary, proposed measures to protect affected fish and wildlife resources. The final proposal mutually agreed upon by CDFW and the applicant is the LSA Agreement.

Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the state 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 one or more acres of land require development and implementation of a SWPPP. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with 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 a Waste Discharge Requirements (WDR) for these activities.

California Environmental Quality Act

In accordance with CEQA Guidelines § 15380, a species or subspecies not specifically protected under the federal or California ESAs or NPPA may be considered endangered, rare, or threatened for CEQA review purposes if the species meets certain criteria specified in the Guidelines. These criteria parallel the definitions used in the ESA, California ESA, and NPPA. Section 15380 was included in the CEQA Guidelines primarily to address situations in which a project under review may have a significant effect on a species that has not been listed under the ESA, California ESA, or NPPA, but that may meet the definition of endangered, rare, or threatened. Animal species identified as SSC by CDFW, birds identified as BCC by USFWS, and plants identified by the CNPS as rare, threatened, or endangered may meet the CEQA definition of rare or endangered.

Species of Special Concern

SSC are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal ESA, California ESA, or California Fish and Game Code, but currently satisfies 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 range.
- The species is listed as federally (but not state) threatened or endangered or 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 habitats that are threatened.

Projects that result in substantial impacts to SSC may be considered significant under CEQA.

U.S. Fish and Wildlife Service Birds of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates 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, USFWS published a list of BCC (USFWS 2021a) 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. Projects that result in substantial impacts to BCC may be considered significant under CEQA.

Sensitive Natural Communities

The CDFW maintains the California Natural Community List (CDFW 2020), which provides a list of vegetation alliances, associations, and special stands as defined in the *Manual of California Vegetation* (Sawyer et al. 2009), along with their respective state and global rarity ranks. Natural communities with a state rarity rank of S1, S2, or S3 are considered sensitive natural communities. Impacts to sensitive natural communities may be considered significant under CEQA.

California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2021), 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, academia, non-governmental

organizations, and private-sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the 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, 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 1 through 3, with 1 being the most threatened and 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 (more 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 percent 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 2021).

Substantial impacts to plants ranked 1A, 1B, 2, and 3 are typically considered significant under CEQA Guidelines § 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 4 and at the discretion of the CEQA lead agency.

CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (e.g., 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.

Specifically, § 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, which provides examples of impacts that would normally be considered significant.

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 under CEQA. The reason for this is that 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.

4.4.2.3 Local

Butte County General Plan 2030

The Biological Resources section of the Conservation and Open Space Element of the Butte County General Plan 2030 addresses the protection, enhancement, utilization and management of natural resources and the environment (Butte County 2012). The following goals of the Conservation and Open Space Element are pertinent to this Project:

Goal COS-6. Engage in cooperative planning efforts to protect biological resources.

Goal COS-7. Conserve and enhance habitat for protected species and sensitive biological communities.

Goal COS-8. Maintain and promote native vegetation.

Goal COS-9. Protect identified special-status plants and animal species.

Butte County Oak Woodland Mitigation Ordinance

An ordinance proposed as Butte County Code Chapter 53, Development Mitigation, Article I Oak Woodland Mitigation Ordinance applicable only to discretionary project applications (examples include proposed subdivisions, parcel maps, and use permits) in the unincorporated area of Butte County. The Ordinance sets impact thresholds and mitigations for removal of trees of the genus Quercus, commonly known as oak trees.

The Ordinance requires an Oak Woodland Evaluation Plan prepared by a qualified professional as part of a project application to identify the area of oak canopy (the surface area under the dripline of the oak tree) on the project site and the percentage proposed for removal. The Ordinance proposes that more than 10% removal of oak canopy area is considered a significant impact subject to replacement through several mitigation options including a conservation easement; payment to an approved mitigation bank, land trust or to the State Oak Woodlands Conservation Fund.

The area of oak canopy removed greater than 10% is required to be replaced at a ratio of 2:1 and increases, if removal exceeds 50%, to 3:1. The Ordinance limits oak canopy removal to 70%. Project

applications that are inconsistent with the ordinance are required to have project-specific environmental review for the impacts to oak woodlands.

The Ordinance includes the following sections: Title; Findings; Purpose; Relationship to Other Laws, Regulations and Ordinances; Alternate Project Design and Review; Applicability; Definitions; Exemptions; Oak Woodland Evaluation Plan; Oak Canopy Removal; Oak Canopy Mitigation; Oak Canopy Replacement Ratio; Calculation of Oak Canopy Mitigation; Equivalent Oak Canopy Replacement Planting Standards; Site Preparation and Construction Impacts; Monitoring of Approved Projects; Approval Required Prior to Removal; Subsequent Projects; and, Premature Removal.

4.4.3 Biological Resources (IV) Environmental Checklist and Discussion

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

Less than significant impact with mitigation incorporated.

No special-status species are known to occur within the Study Area; however, special-status plant and animal surveys have not been conducted. The Study Area includes potential habitat for special-status species within the impact area. Potential effects to special-status species are summarized in the following sections by taxonomic group or species.

Special-Status Plants

There is no potential habitat for federally or state-listed plant species in the Study Area, but there is potential or low potential for 25 non-listed special-status plant species to occur. Project development would permanently remove or alter a minimal amount of marginally suitable or suitable potential habitat for special-status plants, and in the unlikely chance that special-status plant populations occur onsite they may be directly or indirectly impacted by development.

Implementation of mitigation measures **BIO-1**, **PLANT-1**, and **PLANT-2** would avoid, minimize, or compensate for potential effects to special-status plants. With implementation of these measures, the Project is not expected to significantly impact special-status plants.

Special-Status and Other Protected Birds

There is potential habitat for one federally or state-listed bird species in the Study Area, the bald eagle, and there is potential for six non-listed special-status bird species and a variety of other birds that are protected under the MBTA and the California Fish and Game Code. Project development would permanently remove or alter nesting and foraging habitat in the development area, and Project

construction would generate a temporary disturbance that would likely displace foraging birds from the Study Area during construction. Permanent removal or alteration of this habitat and displacement of foraging birds during construction is not expected to significantly impact special-status birds.

Implementation of mitigation measures **BIO-1**, **BIRD-1**, and **BIRD-2** would avoid or minimize potential effects to special-status birds and other protected birds.

Special-Status Mammals

Two special-status bats have potential to occur in the Study Area. Removal of trees and structures may directly impact roosting habitat. Project development would permanently remove a minimal amount of potential roosting and foraging habitat in the development area, and Project construction would generate a temporary disturbance during the day that would likely displace day-roosting bats from the Study Area. Permanent removal of a minimal amount of potential roosting or foraging habitat and displacement of day-roosting bats during construction is not expected to significantly impact special-status bats.

Implementation of mitigation measures **BIO-1** and **BAT-1** would avoid or minimize potential effects to special-status bats.

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

No impact.

The Study Area supports mixed conifer forest around the margins of the CAL FIRE and CCC facilities. Mixed conifer forest is not considered a sensitive natural community, and there is no riparian habitat onsite. Therefore, the Project would have **no impact** on riparian habitat or 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?	☐	☐	☐	☒

No impact.

Based on the preliminary aquatic resources assessment, included in the BRA, the Project would have **no impact** on federally protected wetlands. The detention basin is not likely to be jurisdictional under Section 404 of the CWA. Therefore, the Project is not expected to impact aquatic resources, including waters of the U.S. and State.

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.

The Study Area provides limited migratory opportunities for terrestrial wildlife because of existing developed CAL FIRE and CCC operations onsite. Project construction is likely to temporarily disturb and displace some wildlife from the Study Area. Some wildlife such as birds or nocturnal species are likely to continue to use the habitats opportunistically for the duration of construction. Once construction is complete, wildlife movements are expected to resume but will likely be more limited through the developed areas of the Study Area. The Project is expected to have a **less than significant impact** on wildlife movement.

There are no documented nursery sites and no nursey sites were observed within the Study Area during the site reconnaissance. Therefore, the Project is not expected to impact wildlife nursery sites.

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

No impact.

There are no oak woodlands present within Study Area. The Project will **not impact** oak woodlands protected under the County's Oak Woodland Mitigation Ordinance. The Project would not conflict with any other local policies or ordinances.

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

No impact.

The Study Area is not covered by any local, regional, or state conservation plan. Therefore, the Project would have **no impact** with a local, regional, or state conservation plan.

4.4.4 Mitigation Measures

The following general measures are required to avoid impacts to onsite biological resources:

BIO-1: Worker Environmental Awareness Program

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

4.4.4.1 Special-Status Plants

There is potential or low potential for 26 special-status plants to occur within the Study Area. The following measures are required to minimize potential impacts to special-status plants:

PLANT-1: Special-Status Plant Surveys

- A qualified biologist shall perform floristic plant surveys according to USFWS, CDFW, and CNPS protocols prior to construction, timed according to the appropriate phenological stage for identifying target species. Known reference populations shall be visited or local herbaria records shall be reviewed, if available, prior to surveys to confirm the phenological stage of the target species. If no special-status plants are found within the Project site, no further measures pertaining to special-status plants are necessary.

PLANT-2: Special-Status Plant Avoidance

- If special-status plants are identified within 25-feet of the Project impact area, the following mitigation measures shall be required:

- If avoidance of special-status plants is feasible, establish and clearly demarcate avoidance zones for special-status plant occurrences prior to construction. Avoidance zones shall include the extent of the special-status plants plus a 25-foot buffer, unless otherwise determined by a qualified biologist, and shall be maintained until the completion of construction. A qualified biologist/biological monitor shall be present if work must occur within the avoidance buffer to ensure special-status plants are not impacted by the work.
- If avoidance of special-status plants is not feasible, mitigate for significant impacts to special-status plants. Mitigation measures shall be developed in consultation with CDFW. Mitigation measures may include permanent preservation of onsite or offsite habitat for special-status plants or translocation of plants or seeds from impacted areas to unaffected habitats.

4.4.4.2 Special-Status Birds, Raptors (Osprey, Sharp-Shinned Hawk, Cooper's Hawk, and Bald Eagle), Other Protected Raptors, and MBTA-Protected Birds

For Project activities with potential to affect active raptor nests (e.g., activities proposed to occur in or within 500 feet of suitable habitat), the following measure is required to prevent potential impacts.

BIRD-1: Pre-Construction Nesting Bird Survey for Raptors

- If construction is to occur during the nesting season (generally February 1 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable nesting habitat on the Project site within 14 days of the commencement of construction. The survey shall be conducted within a 500-foot radius of Project work areas for raptors. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

For Project activities with potential to affect the active nests of other (non-raptor) special-status birds and birds protected under the MBTA (e.g., activities proposed to occur in or within 100 feet of suitable habitat), the following measure is required to prevent potential impacts to active nests.

BIRD-2: Pre-Construction Nesting Bird Survey for Non-Raptors

- If construction is to occur during the nesting season (generally February 1 through August 31), a qualified biologist shall conduct a pre-construction nesting bird survey of all suitable nesting habitat on the Project site within 14 days of the commencement of construction. The survey shall be conducted within a 100-foot radius of Project work. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer established in coordination with CDFW until the breeding season has ended or until a qualified biologist has determined that the young

have fledged and are no longer reliant upon the nest or parental care for survival. Pre-construction nesting surveys are not required for construction activity outside the nesting season.

4.4.4.3 Special-Status Bats

There is potential for two special-status bats to occur within the Study Area, and the majority of the Study Area is planned for impact. The following measure is required to minimize potential impacts to special-status bats.

BAT-1: Special-Status Bat Surveys

- Within 14 days prior to Project activities that may impact bat roosting habitat (e.g., removal of manmade structures or trees), a qualified biologist shall survey for all suitable roosting habitat within the Project impact limits. If suitable roosting habitat is not identified, no further measures are necessary. If suitable roosting habitat is identified, a qualified biologist shall conduct an evening bat emergence survey that may include acoustic monitoring to determine whether or not bats are present. If roosting bats are determined to be present within the Project site, consultation with CDFW prior to initiation of construction activities or preparation of a Bat Management Plan outlining avoidance and minimization measures specific to the roost(s) potentially affected shall be required.

4.5 Cultural Resources

ECORP Consulting, Inc. prepared a *Cultural Resources Inventory and Finding of Effect Report* (ECORP 2021c) for the Proposed Project to determine if cultural resources were present in or adjacent to the Project area and assess the sensitivity of the Project area for undiscovered or buried cultural resources. Cultural resources are defined as pre-contact (prehistoric) and historic sites, buildings, objects, structures, and districts or any other physical evidence associated with human activity considered important to a culture, or a community for scientific, traditional, or religious reasons. The information provided below is an abridged version of this report and is provided here to afford a brief context of the potential cultural resources in the Project area.

Due to the sensitive nature of cultural resources, which is restricted from public distribution by state and federal law, the cultural resources report is not included in the IS/MND appendices; however, all pertinent information necessary for impact determinations is included in this section. A redacted version of the cultural resources report that does not include site records or locations may be obtained by contacting DGS Real Estate Services Division (RESD).

4.5.1 Environmental Setting

4.5.1.1 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. 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.

Around 8,000 BP, there was a shift in focus from hunting toward a greater reliance on plant resources. This period, which extended until around 5,000 years BP, is sometimes referred to as the Millingstone Horizon. An increase in the size of groups and the stability of settlements is indicated by deep, extensive middens at some sites from this period. In sites dating to after about 5,000 BP, archaeological evidence indicates that reliance on both plant gathering and hunting continued as in the previous period, with more specialized adaptation to particular environments. During this period, new peoples from the Great Basin began entering southern California. 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 (ECORP 2021c).

4.5.1.2 Paleo-Indian Period

This period began when the first people began to inhabit what is now known as the California culture area. It was commonly believed these first people subsided on big game and minimally processed foods, (i.e., hunters and gatherers), presumably with no trade networks. More recent research indicates these people may have been more sedentary, relied on some processed foods, and traded (ECORP 2021b). Populations likely consisted of small groups traveling frequently to exploit plant and animal resources.

4.5.1.3 Archaic Period

This period was characterized by an increase in plant gathering for food, more elaborate burial goods, and increase in trade network complexity. The three divisions, Lower, Middle and Upper Archaic, correspond to pre-contact climate changes are and characterized by the following aspects:

Lower Archaic Period

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

Middle Archaic Period

This period is characterized by a drier climate period. Rosenthal et al. (2007) identified two distinct settlement/subsistence patterns in this period: the Foothill Tradition and the Valley Tradition. Artifacts from the foothill tradition include locally sourced flaked-stone and groundstone cobbles, while the Valley Tradition was generally characterized by diverse subsistence practices and extended periods of sedentism.

Upper Archaic Period

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

4.5.1.4 Emergent Period

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

4.5.1.5 Ethnography

Ethnographically, the Project area is within the ethnographic tribal territory of the Maidu, located in the lower foothills of the western slopes of the Sierra Nevada range and in the periphery of the Northern Sacramento Valley. The Maidu were grouped into three division by early ethnographers based on language and material culture: the Northeastern (Mountain Maidu), Northwestern (Konkow), and Southern (Nisenan). Because many believe the Mountain Maidu and Konkow to be so closely related, ethnographers tended to group them as one.

The Konkow occupied territory located immediately adjacent and to the southwest of the Mountain Maidu, along the Feather and Sacramento rivers, to their southern boundary at the Sutter Buttes. The Konkow were primarily located in the lower elevations of the Sierra Nevada and along the valley floor.

The village community was the primary settlement type among the Maidu and consisted of a cluster of three to five geographically well-defined small villages. The Konkow, in comparison, were dispersed throughout the valley floor along river canyons, in less concentrated settlement areas. Both tribal groups, preferred permanent settlement locations on rises above flood-prone meadows and marshes and with broad views of the surrounding terrain. Residential structure types and building materials varied seasonally.

While much of this section includes Native American pre-contact and historic information, Section 4.18 *Tribal Cultural Resources* of this Draft IS/MND includes further analysis of the ethnography of the Project area.

4.5.1.6 History

The Project area is located in the northern portion of Butte County. Butte County was one of the first 27 California counties and originally encompassed a much larger area. It was named for the landform now known as the Sutter Buttes, located in present-day Sutter County to the south. In the latter part of the 19th century, the county land was primarily agricultural, with timber and mineral lands encompassing less

than half the county area. Captain Luis A. Argüello led an expedition to the region in 1820 and was likely the earliest nonnative to explore the area. Fur trappers of the Hudson Bay Company followed and traversed the region as early as 1828.

The Project area is located near the town of Magalia. The settlement was known as Dogtown prior to its name being changed to Magalia (the Latin word for cottages or huts). In April 1859, a 54-pound gold nugget was discovered at a hydraulic mine in the Feather River Canyon and became known as the Dogtown Nugget. The Dogtown Nugget Discovery Site in Magalia is now a California Historical Landmark (CHL #771), located approximately 3 miles south of the Project area.

CAL FIRE was established in 1905 during the Conservation Movement of the early 20th century; the Forest Protection Act of 1905 was central to the establishment of the agency. By 1908, there were 721 fire wardens in California, 269 of whom were employed by the USFS. CAL FIRE and State Forester were synonymous through 1919, when the California State Legislature first provided them funding. By the following year, 10 districts were established in northern California counties, each with a ranger who oversaw operations. The CCC, established by Franklin Delano Roosevelt as part of his administration's Emergency Conservation Work Programs, established fire suppression camps throughout the State, and they erected 50 new fire lookouts between 1934 and 1936. All of these sites were part of the CAL FIRE detection system, and many CCC camps became permanent fire stations.

The BFC was originally operated as the Magalia Camp from 1949 to 1973. Magalia Camp was a joint operation of the CAL FIRE and the CDCR. The Magalia Camp was converted to the Butte Ecology Center in the 1970s and later was used as the Magalia Nursery. The Butte Ecology Center was managed by CAL FIRE and the California Ecology Corps. By 1978, the camp began the BFC and the Magalia Nursery operated from within the center. The goal of the nursery was to grow and sell tree seedlings to help reforest burned and understocked forest land. The camp is now used as a firefighter training facility and sits on 80 acres of land.

There are 28 historic-period buildings at the BFC, 26 of which are within the current Project area. Two buildings associated with the BFC are located outside the Project area near Paradise Lake. The 28 historic period buildings located at the BFC are essentially utilitarian and include mostly shops and sheds. The buildings share a similar design and materials. These buildings are made of a wood frame, metal roofs, concrete pads or foundation, with green painted brick exterior siding, all which is common of buildings at CAL FIRE facilities. The 28 buildings/structures have a basic design and construction.

4.5.2 Regulatory Setting

4.5.2.1 Federal

National Historic Preservation Act

The National Historic Preservation Act (NHPA) requires that the federal government list significant historic resources on the National Register of Historic Places (NRHP), which is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service (NPS) and includes

listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

Structures, sites, buildings, districts, and objects more than 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a historic district can also be included in the NRHP.[1] The criteria for listing in the NRHP include resources that:

a) are associated with events that have made a significant contribution to the broad patterns of history;
b) are associated with the lives of persons significant in our past;
c) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) have yielded or may likely yield information important in prehistory or history.

4.5.2.2 State

California Register of Historical Resources

The State Historical Resources Commission designed the California Register of Historical Resources (CRHR) for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. The CRHR is the authoritative guide to the state's significant historical and archaeological resources. This program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and affords certain protections under CEQA.

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both historical resources and unique archaeological resources. Pursuant to PRC § 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

Historical resource is a term with a defined statutory meaning (PRC § 21084.1). Under CEQA Guidelines Section 15064.5(a), historical resources include the following:

[1] A [historic] district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development (NPS 1983).

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC § 5024.1).
- A resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (PRC Section 5024.1), including the following:

    a) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    b) Is associated with the lives of persons important in our past;
    c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    d) Has yielded, or may be likely to yield, information important in prehistory or history.

The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC § 5020.1(k)), or identified in a historical resources survey (meeting the criteria in PRC § 5024.1(g)) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC §§ 5020.1(j) or 5024.1.

Historic resources are usually 45 years old or older and must meet at least one of the criteria for listing in the CRHR, described above (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity.

Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be historical resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (PRC § 5024.1 and 14 CCR § 4850).

CEQA also requires lead agencies to determine if a proposed project would have a significant effect on unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083.2 regarding unique archaeological resources.

"Unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the project on that resource shall not be considered a significant effect on the environment (14 CCR Section 15064[c][4]).

4.5.2.3 Thresholds of Significance

Following PRC §§ 21083.2 and 21084.1, § 15064.5, and Appendix G of the CEQA Guidelines, cultural resource impacts are considered to be significant if the project would result in a positive response to any of the following questions:

1. Would the project cause a substantial adverse change in the significance of a Historical Resource pursuant to CEQA Guidelines Section 15064.5?
2. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
3. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

State CEQA Guidelines Section 15064.5 defines *substantial adverse change* as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

CEQA Guidelines Section 15064.5(b)(2) defines *materially impaired* for purposes of the definition of substantial adverse change as follows:

The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code,

unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing mitigation measures, the significance of cultural resources must first be determined. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

- Identify potential historical resources and unique archaeological resources;
- Evaluate the significance of the potential historical resources; and
- Evaluate the effects of the project on eligible (significant) historical resources and unique archaeological resources.

4.5.2.4 Methods of Analysis

Records Search and Literature Review

The efforts to identify cultural resources within the Project area consisted of a records search of the California Historical Resources Information System (CHRIS) at the Northeastern Information Center of the CHRIS at California State University, Chico on January 28, 2021, a review of historic maps, photographs, records on file with the Office of Historic Preservation, ethnographic information, literature pertaining to the Project area and surrounding region, a review of geological and soils data, and an archaeological pedestrian survey by qualified professional archaeologists.

In addition to the record search, ECORP contacted the California Native American Heritage Commission (NAHC) on January 28, 2021, to request a search of the Sacred Lands File for the Project area to determine whether or not Sacred Lands have been recorded by California Native American tribes within the Project area. Native American Sacred Lands may coincide with archaeological sites.

ECORP mailed letters to the Butte County Historical Society on January 28, 2021, to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance in the area.

Pedestrian Survey

On March 4, 2021, ECORP subjected the Project area to an intensive pedestrian survey under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983). ECORP expended one person-day in the field. At that time, the ground surface was examined for indications of surface or subsurface cultural resources by and under the direction of professionals meeting the Secretary of the Interior's standards for prehistoric and historic archaeology. ECORP also documented the buildings

within the Area of Potential Effects on appropriate Department of Parks and Recreation (DPR) 523 update forms; architectural details and integrity considerations were noted for the features of each building, including its setting relative to the rest of the property.

Peer Review

A qualified professional architectural historian from ECORP conducted a peer review of the Historic Building Evaluation Report, completed by California State University, Stanislaus in April 2017 for the CAL FIRE BFC in Magalia, which included the evaluation of 28 historic-period buildings against the NRHP and the CRHR (Napton and Greathouse 2017). The previous study reviewed the history of the CalFire facilities and included a site visit to record and assess which buildings were present at the BFC. Napton and Greathouse concluded that the 28 BFC buildings meet none of the criteria of the NRHP and/or the CRHR, or the CAL FIRE Eleven Point Rating Criteria, and/or the CAL FIRE 2001 Rating Criteria. The peer review assessed the study against cultural resource requirements of Section 106 of the NHPA and of CEQA, as well as PRC 5024. Because all of the BFC buildings are functionally related and none of them stand as individual resources independent of their historical or current use, they were considered as one collective resource in ECORP's peer review of the 2017 study.

Results

The records search identified no cultural resources within the Project area and nine historic-period resources in the vicinity. No pre-contact resources were identified in the vicinity.

A search of the Sacred Lands File by the NAHC did not indicate the presence of Native American cultural resources in the vicinity of the Project area.

As a result of ECORP's pedestrian survey, 36 BFC fire buildings were documented. Twenty-eight of these buildings were historic-period. During the 2017 recording of the BFC (Napton and Greathouse 2017), 28 buildings and structures were recorded that were constructed between 1949 and 1981. Most of the 28 buildings/structures were noted to be essentially utilitarian, such as the facility's several storage sheds and shops.

According to the 2017 study peer reviewed by ECORP (2021c), the 28 buildings were assigned a National Register evaluation code of 6Z, which means they are not eligible for listing for the NRHP or the CRHR. According to Napton and Greathouse (2017), the 28 buildings do not appear to meet any of the criteria of the NRHP or CRHR based on sufficient but brief architectural assessment of the facility. ECORP completed an updated architectural inventory and evaluation for the CAL FIRE BFC buildings and facilities and included considerations against the CHL criteria as well as supplemental statements of eligibility for the CRHR and NRHP. ECORP's peer review and supplemental evaluations concurred with the findings of the 2017 report, and concluded the CAL FIRE BFC buildings and facilities are not eligible for the CRHR, NRHP, and CHL. The BFC is not considered a Historical Resource under CEQA or a Historic Property under the NHPA.

4.5.3 Cultural Resources (V) Environmental Checklist and Discussion

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

Less than significant with mitigation incorporated.

The *Cultural Resources Inventory and Peer Review Report* identified one cultural resource within the Project area: the BFC. The BFC was evaluated as not eligible for the CRHR and therefore not considered a Historical Resource or unique archaeological resource for the purposes of CEQA. Therefore, the Project will not have an impact on such resources.

However, there remains the possibility that excavations associated with the development of the Project could affect subsurface intact archaeological deposits. Therefore, unanticipated subsurface discoveries may arise during Project construction. As such, mitigation measure **CUL-1** has been included to reduce the potential impact to historical resources to **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) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

The Project area was investigated by a professional archaeologist. No archaeological sites were identified in the Project area. However, several of the nine historic period resources identified in the records search within 0.5 mile of the Project area, include historic period archaeological sites. Although the underlying geomorphology is unlikely to contain pre-contact cultural resources based on the age and slope on volcanic ridges of the Cascade Range, there has been alluvium deposited along the Little Butte Creek, and pre-contact archaeological sites are known to be located along perennial waterways. Therefore, the potential exists for buried archaeological sites in the Project area.

Archaeological discoveries of buried artifacts or features during Project implementation have the potential to affect archaeological resources, resulting in a potentially significant impact. Therefore, mitigation measure **CUL-1** has been included to reduce the potential impact to archaeological resources to **less than significant with mitigation incorporated**.

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

c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Less than significant with mitigation incorporated.

No human remains have been identified in the Project area. However, ground-disturbing Project activity could result in the inadvertent disturbance of currently undiscovered human remains. Procedures of conduct following the discovery of human remains on non-federal lands are mandated by Health and Safety Code § 7050.5, by PRC § 5097.98, and by CEQA in CCR § 15064.5(e).

Implementation of mitigation measure **CUL-1** would assure that any discovery of human remains within the Project area would be subject to these procedural requirements. Implementation of this mitigation measure would reduce impacts associated with the discovery/disturbance of human remains to **less than significant with mitigation incorporated.**

4.5.4 Mitigation Measures

CUL-1: Unanticipated Discovery

- If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work shall halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:
  1. If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
  2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify CAL FIRE and DGS. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a Historic Property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.
  3. If the find includes human remains, or remains that are potentially human, the professional archaeologist 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

4.6.1 Environmental Setting

4.6.1.1 Electricity Service

PG&E provides electricity to the Project area. It generates or buys electricity from hydroelectric, nuclear, renewable, natural gas, and coal facilities. PG&E provides natural gas and electricity to most of the northern 2/3 of California, from Bakersfield and Barstow to near the Oregon, Nevada, and Arizona state lines. It provides 5.2 million people with electricity and natural gas across 70,000 square miles. PG&E announced in 2017 that 80 percent of the company's delivered electricity comes from greenhouse gas (GHG) emission-free sources, including renewables, nuclear, and hydropower.

4.6.1.2 Energy Consumption

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

The electricity consumption associated with all uses in Butte County from 2015 to 2019 is shown in Table 4.6-1. As indicated, the demand has decreased since 2015.

Table 4.6-1. Electricity Consumption in Butte County 2015-2019

Year	Electricity Consumption (kWh)
2019	1,396,246,344
2018	1,475,788,821
2017	1,529,818,607
2016	1,482,073,760
2015	1,492,098,630

Source: California Energy Commission (CEC) 2020

Automotive fuel consumption in Butte County from 2016 to 2020 is shown in Table 4.6-3. As shown, automotive fuel consumption has decreased since 2016.

Table 4.6-2. Automotive Fuel Consumption in Butte County 2016–2020

Year	Automotive Fuel Consumption (gallons)
2020	98,166,772
2019	112,460,842
2018	116,603,614
2017	117,448,303
2016	115,075,780

Source: CARB 2021

4.6.2 Energy (VI) Environmental Checklist and Discussion

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

Less than significant impact.

The impact analysis focuses on the four sources of energy relevant to the Proposed Project: electricity, imported propane, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations. 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 electricity estimated to be consumed by the Project is quantified and compared to that consumed by all land uses in Butte County.

Similarly, the amount of fuel necessary for Project construction and operations is calculated and compared to that consumed in Butte County.

The analysis of electricity usage is based on CalEEMod modeling conducted by ECORP Consulting (*Appendix B*), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMission FACtor (EMFAC) 2021 computer program, which provides projections for typical daily fuel usage in Butte County. The amount of total construction-related fuel use was estimated using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1 (2016). Energy consumption associated with the Proposed Project is summarized in Table 4.6-3.

Table 4.6-3. Proposed Project Energy and Fuel Consumption

Energy Type	Annual Energy Consumption	Percentage Increase Countywide (percent)
Building Energy Consumption		
Electricity Consumption[1]	543,521 kWh	0.03
Automotive Fuel Consumption		
Project Construction 2023[2]	64,926 gallons	0.06
Project Construction 2024[2]	81,675 gallons	0.08
Project Operations[3]	23,736 gallons	0.02

Source: [1]ECORP 2021a (*Appendix B*); [2]ECORP 2021d(*Appendix E*)
Notes: The Project increases in electricity consumption are compared with all of uses in Butte County in 2019, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2020, the most recent full year of data.

As shown in Table 4.6-3, the increase in electricity usage as a result of the Project would constitute 543,521 kWh, or a 0.03 percent increase in the typical annual electricity consumption attributable to all uses in Butte County. Additionally, it is noted that the Project would rely on imported propane. No unusual Project characteristics would necessitate the use of imported propane that would be less energy-efficient than at both the existing facility under current conditions and other similar land uses relying on imported propane. Construction contractors would purchase their own gasoline and diesel fuel from local suppliers and would conserve the use of their supplies to minimize costs and maximize profit. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

As further indicated in Table 4.6-3, the Project's fuel consumption during the construction period is estimated to be 64,926 gallons of fuel during 2023 construction and 81,675 gallons of fuel during 2024 construction. This would increase the annual gasoline fuel use in the County by 0.06 percent and 0.08 percent respectively. 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 conserve the use of their supplies to minimize costs and maximize profit. 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. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

As indicated in Table 4.6-3, the Project is estimated to consume 23,736 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.02 percent. The amount of operational automotive fuel use was estimated using CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Butte County. This analysis conservatively assumes that all 135 anticipated automobile trips projected to be generated by the Project would be new to Butte County. It should be noted that vehicle trips associated with future operation of the BFC would be similar to current operations and the analysis shown in Table 4.6-3 can be considered conservative. The Project would not result in any unusual characteristics that would result in excessive long-term operational automotive fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to current conditions and other similar developments in the region.

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

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

Less than significant impact.

The Project would be designed in a manner consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. The Project is proposing the partial demolition and reconstruction of buildings at the BFC. The new buildings would be built to Title 24 standards and achieve a minimum LEED Silver certification. Thus, the Project site would be more energy efficient than current conditions. The Project would not conflict with or obstruct any local or state plans for renewable energy or energy efficiency.

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

4.6.3 Mitigation Measures

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

4.7 Geology and Soils

This section addresses the potential impact of the Proposed Project on geological and soil resources within the Project area. The information and analysis presented here is based, in part, on the report entitled, *Geotechnical Engineering Report Butte Fire Center – California Conservation Corps Camp* by Mid

Pacific Engineering, Inc. (MPE, 2021). MPE conducted a site reconnaissance on December 10, 14, and 15, 2020, as part of their geotechnical investigation. The geotechnical report is included with this Initial Study as *Appendix F*.

4.7.1 Environmental Setting

4.7.1.1 Geomorphic Setting

The Project site lies near the boundary between the Great Valley, Cascade Range, and Sierra Nevada geomorphic provinces of California. The Great Valley is an alluvial plain, approximately 50 miles wide and 400 miles long, located between the Coast Ranges and Sierra Nevada Range. The Great Valley is drained by the Sacramento and San Joaquin rivers, which join and enter San Francisco Bay. The eastern border is the west-sloping Sierran bedrock surface, which continues westward beneath alluvium and older sediments. The western border is underlain by east-dipping Cretaceous and Cenozoic strata that form a deeply buried synclinal trough, lying beneath the Great Valley along its western side. The San Joaquin Valley is the southern part of the Great Valley. Its great oil fields follow anticlinal uplifts that mark the southwestern border of San Joaquin Valley and its southern basin. To the north, the Sacramento Valley plain is interrupted by the Marysville Buttes, an isolated Pliocene volcanic plug approximately 2,000 feet high (MPE 2021).

The Cascade Range, an arc-shaped chain of volcanic cones, extends from British Columbia to northern California, roughly parallel to the Pacific coastline. In the Project region, the province is dominated by Mount Shasta, a glacier-mantled volcanic cone, rising 14,162 feet amsl. The southern termination is Lassen Peak. The Cascade Range is transected by deep canyons of the Pit River. The river flows through the range between these two major volcanic cones, after winding across the interior of the Modoc Plateau on its way to the Sacramento River (MPE 2021).

The Sierra Nevada Geomorphic Province is an asymmetric mountain range with a long gentle western slope and a high and steep eastern escarpment. The Sierra Nevada Range is 50 to 80 miles wide and runs through eastern California for more than 400 miles, from the Mojave Desert on the south to the Cascade Range and the Modoc Plateau on the north (MPE 2021).

4.7.1.2 Site Setting

The Project site is underlain by the Pliocene Tuscan Formation, consisting of interbedded lahar deposits, volcanic conglomerate, volcanic sandstone, and pumiceous tuff. Based on the soils and rock encountered during MPE's site reconnaissance, it is their opinion that the soils and rock underlying the Project site are generally consistent with those mapped as Tuscan Formation (MPE 2021).

4.7.1.3 Soils

According to the NRCS Web Soil Survey database, the developed Project site is composed of three soil units: Paradiso loam, 2 to 15 percent slopes, Mountyana gravelly loam, 2 to 15 percent slopes, and Surnuf-Bigridge-Spine complex, 15 to 30 percent slopes. The Web Soil Survey also identifies drainage, flooding, erosion, runoff, and the linear extensibility potential for Project area soils (NRCS 2021a).

The Paradiso soils consist of well-drained, clayey residuum weathered from volcanic rocks found at the top of volcanic ridges. These soils typically contain a Linear Extensibility Percent (LEP) of 6 to 9, which corresponds to a high shrink-swell potential and have a typical restrictive feature (impermeable layer) at a depth of 60 inches. Paradiso loam, 2 to 15 percent slopes has the following properties:

- Drainage Class: Well-Drained
- Flooding Frequency Class: Never
- Hydrologic Soil Group: C

Mountyana soils consist of well-drained, fine-loamy residuum weathered from volcanic breccia. These soils typically contain a LEP of 3 to 6, which corresponds to a moderate shrink-swell potential and have a typical restrictive feature (impermeable layer) at a depth of 60 to 80 inches. Mountyana gravelly loam, 2 to 15 percent slopes has the following properties:

- Drainage Class: Well-Drained
- Flooding Frequency Class: Never
- Hydrologic Soil Group: C

Surnuf-Bigridge-Spine complex consists of well-drained silty and clayey colluvium and/or residuum weathered from metavolcanic rocks as well as fine-loamy colluvium and/or residuum weathered from metavolcanic rocks These soils typically contain a LEP of 6 to 9, which corresponds to a high shrink-swell potential. Surnuf-Bigridge-Spine complex, 15-30 percent slopes has the following properties:

- Drainage Class: Well Drained
- Flooding Frequency Class: Never
- Hydrologic Soil Group: B

Hydrologic Soil Groups

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation. On site soils fall within group B and C. The groups are defined as follows:

- Group A: Soils having a high infiltration rate (low runoff potential) when thoroughly wet.
- Group B: Soils having a moderate infiltration rate when thoroughly wet.
- Group C: Soils having a slow infiltration rate when thoroughly wet.
- Group D: Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet.

4.7.1.4 Radon

Radon is a colorless, odorless, tasteless, and radioactive gas that is produced as a natural decay product of uranium. Potentially high radon levels are typically associated with geologic uplift, the uranium/lignite belt, or granite or shale outcrops. Because of its radioactivity, studies have shown that there is a link between radon and lung cancer at elevated concentrations. Persons living in a building with elevated radon concentrations may have an increased risk of contracting lung cancer over a period of years. Butte County is an USEPA Radon Zone 3, an area of low radon potential with levels of radon typically below 2.0 picocuries per liter of air (pCi/L). The USEPA radon threshold limit is 4.0 pCi/L. Radon is not anticipated to be a geologic hazard for the Project site.

4.7.2 Regulatory Setting

Laws and regulations relevant to the Proposed Project are presented below.

4.7.2.1 State

Alquist-Priolo Earthquake Fault Zoning Act (PRC, §§ 2621-2630).

This Act requires that *sufficiently active* and *well-defined* earthquake fault zones be delineated by the State Geologist and prohibits locating structures for human occupancy on active and potentially active surface faults. Note that since only those potentially active faults that have a relatively high potential for ground rupture are identified as fault zones; not all potentially active faults are zoned under the Alquist-Priolo Earthquake Fault Zone, as designated by the State of California.

California Building Code (CCR, Title 23)

The California Building Code (CBC) provides a minimum standard for building design, which is based on the Uniform Building Code, but is modified for conditions unique to California. The CBC is selectively adopted by local jurisdictions, based on local conditions. The CBC contains requirements pertaining to multiple activities, including excavation, site demolition, foundations and retaining walls, grading activities including drainage and erosion control, and construction of pipelines alongside existing structures.

4.7.3 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:	☐	☐	☒	☐

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

Less than significant impact.

i) and ii) Four active and/or potentially active faults exist within 62 miles of the Project site. These include Segments 1 and 2 of the Great Valley Fault System, the Battle Creek fault, and the Hat Creek-McArthur-Mayfield Fault Zone. In addition, the historically active Cleveland Hill fault is mapped approximately 26 miles south of the Project site.

Segment 1 of the Great Valley Fault System is located approximately 40 miles southwest of the Project site. The Maximum Magnitude Earthquakes (Mmax) assumed for the Great Valley 1 and 2 faults in this region are 6.8 and 6.5, respectively. The Battle Creek Fault Zone is located approximately 45 miles north-northwest of the Project site.

The Battle Creek Fault Zone is one of the most prominent structural features in northern California. The fault zone trends nearly east-west east of the Sacramento River and forms a prominent escarpment rising to the northeast that is buried by late Quaternary flows from the Lassen Peak area. The Mmax assumed for the Battle Creek fault in this region is 6.7.

The Hat Creek-McArthur-Mayfield Fault Zone is located approximately 54 miles northeast of the Project site. The Mmax assumed for the Hat Creek-McArthur-Mayfield fault in this region is 7.2.

The Project site does not lie within an Alquist-Priolo Earthquake Hazard Fault Zone as currently designated by the State of California. The closest Earthquake Hazard Fault Zone is the Cleveland Hill fault located approximately 26 miles (42 kilometers) south of the Project site. It is MPE's opinion the fault could present seismic risk to the Project site due to uncertainty of historic earthquake mechanisms possibly related to rise and fall of water levels in Lake Oroville. However, the potential of fault-related surface rupture at the site is low.

iii) Liquefaction is the loss of soil strength or stiffness due to a buildup of pore-water pressure during severe ground shaking. Liquefaction is associated primarily with loose, saturated, fine- to medium-

grained, cohesionless soils. Effects of severe liquefaction can include sand boils, excessive settlement, bearing capacity failures and lateral spreading. MPE indicates there have been no recorded occurrences of seismically induced liquefaction in the site vicinity or the Butte County region. The site is not located within a State Designated Seismic Hazard Zone for liquefaction. Project construction will follow the recommendations of the geotechnical report and impacts of the Project would be less than significant. No mitigation is required.

iv) The Project area has not been evaluated for the potential of earthquake-induced landslide movement on the State of California Seismic Hazards Zones Map (California Geological Survey [CGS] 2001). No evidence of landslides or slope instabilities was observed. The potential for landslides or slope instabilities to occur at the site is considered less than significant. No mitigation is required.

Direct or indirect substantial adverse effects, including the risk of loss, injury, or death, are **less than significant**.

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.

Best management practices (BMPs) are included as part of the SWPPP prepared for the Proposed Project and would be implemented to manage erosion and the loss of topsoil during construction-related activities (Section 4.10 *Hydrology and Water Quality*). Soil erosion impacts would be reduced to a **less than significant** impact. No mitigation is required.

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

Less than significant impact.

The current soil and ground conditions are not likely to be susceptible to liquefaction, coseismic compaction, or landslide. Construction would be consistent with the Project's *Geotechnical Engineering Report*, which includes recommendations designed to address and mitigate site-specific soil conditions. Therefore, related impacts would be **less than significant**, and no mitigation is required.

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.

The onsite materials tested by MPE possess a *very low* expansion potential. Project construction will follow *Geotechnical Engineering Report* recommendations, and related impacts are **less than significant**. No mitigation is required.

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 waste water?	☐	☐	☒	☐

Less than significant impact.

Wastewater collection and treatment is provided by an existing septic system to the south of the facility. New wastewater collection systems will connect to the existing disposal system, and new septic lift stations are needed to connect to the existing leach field. The current septic system functions adequately to serve the BFC wastewater volumes. No substantial increases in wastewater generation are anticipated with implementation of the project. A **less than significant** impact would occur, and no mitigation is required.

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.

ECORP conducted a search of the University of California Museum of Paleontology Specimen Search program in September 2021. The nearest recorded paleontological resource is a complex of fossils, primarily marine, from the late Cretaceous and Eocene epoch. This resource was discovered approximately 14 miles south of the Project site. Shallow excavations in the soil and Quaternary alluvial deposits exposed throughout the Project area likely would not uncover significant fossil vertebrate remains. However,

deeper excavations that extend down into older sedimentary deposits have the potential to encounter significant vertebrate fossil remains. The Project site may be considered sensitive for paleontological resources. This impact is considered potentially significant because unknown paleontological resources could be discovered during excavation. Implementation of mitigation measure **GEO-1** would reduce this impact **to less than significant with mitigation incorporated**.

4.7.4 Mitigation Measures

GEO-1: Discovery of Unknown Paleontological Resources.

- If any paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the area shall be isolated using orange or yellow fencing until CAL FIRE is notified and the area is cleared for future work. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resources. In addition, in the event of an inadvertent find, sediment samples should be collected and processed to determine the small fossil potential on the Project site. If CAL FIRE resumes work in a location where paleontological remains have been discovered and cleared, CAL FIRE shall have a paleontologist onsite to observe any continuing excavation to confirm that no additional paleontological resources are in the area. Any fossil materials uncovered during mitigation activities shall be deposited in an accredited and permanent scientific institution for the benefit of current and future generations.

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

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

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

The local air quality agency regulating the Sacramento Valley Air Basin is the BCAQMD the regional air pollution control officer for the basin. The Appendix G 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 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 (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. Neither Butte County nor the BCAQMD has 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 local GHG emissions significance thresholds the projected emissions are compared to the GHG thresholds issued by the CAPCOA, which is an association of the 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, the lowest promulgated in any region in the state, is considered by the 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.

In *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 62 Cal. 4th 2014, 213, 221, 227, following its review of various potential GHG thresholds proposed in an academic study [Crockett, Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World (July 2011), 4 Golden Gate U. Envtl. L. J. 203], the California Supreme Court identified the use of numeric bright-line thresholds as a potential pathway for compliance with CEQA GHG requirements. The study found numeric bright line thresholds designed to determine when small projects were so small as to not cause a cumulatively considerable impact on global climate change was consistent with CEQA. Specifically, Public Resources Code section 21003(f) provides it is a policy of the state that

> "[a]ll persons and public agencies involved in the environmental review process be responsible for carrying out the process in the most efficient, expeditious manner in order to conserve the available financial, governmental, physical and social resources with the objective that those resources may be better applied toward the mitigation of actual significant effects on the environment."

The Supreme Court-reviewed study noted,

> "[s]ubjecting the smallest projects to the full panoply of CEQA requirements, even though the public benefit would be minimal, would not be consistent with implementing the statute in the most efficient, expeditious manner. Nor would it be consistent with applying lead agencies' scarce resources toward mitigating actual significant climate change impacts" (Crockett, Addressing the Significance of Greenhouse Gas Emissions: California's Search for Regulatory Certainty in an Uncertain World (July 2011), 4 Golden Gate U. Envtl. L. J. 203, 221, 227).

As previously described, the 900 metric tons of CO_2e per year threshold represents a 90 percent capture rate (i.e., this threshold captures projects that represent approximately 90 percent of GHG emissions from new sources). 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 (Crockett 2011). As noted in the academic study, the fact that small projects below a numeric bright line threshold are not subject to CEQA-based mitigation, does not mean such small projects do not help the state achieve its climate change goals because even small projects participate in or comply with non-CEQA-based GHG reduction programs, such as constructing development in accordance with statewide GHG-reducing energy efficiency building standards, called Cal Green or Title 24 energy-efficiency building standards (Crockett 2011), which among many goals seek to reduce GHG emissions from construction projects.

The Project is also evaluated for consistency with the Butte County Climate Action Plan (CAP).

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.

4.8.2.1 Construction Impacts

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

Table 4.8-1. Construction-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/Year)
Construction in 2023	659
Construction in 2024	829
CAPCOA Threshold	*900*
Exceed Threshold?	**No**

Source: CalEEMod version 2020.4.0. Refer to *Appendix B* for Model Data Outputs.

As shown in Table 4.8-1, Project construction would result in the generation of approximately 659 metric tons of CO_2e during the first year of construction and 829 metric tons of CO_2e during the second year of construction. Annual emissions would be generated at levels below the CAPCOA significance threshold.

Once construction is complete, the generation of these GHG emissions would cease. As such, a **less than significant** impact would occur.

Furthermore, GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

In addition, the CEC recently released the 2019 Building Energy Efficiency Standards contained in the CCR, Title 24, Part 6 (also known as the California Energy Code). The 2019 updates to the Building Energy Efficiency Standards focus on several key areas to improve the energy efficiency of newly constructed buildings and additions, and alterations to existing buildings. For instance, effective January 1, 2017, owners/builders of construction projects have been required to divert (recycle) 65 percent of construction waste materials generated during the project construction phase. This requirement greatly reduces the generation of GHG emissions by reducing decomposition at landfills, which is a source of CH_4, and reducing demand for natural resources.

4.8.2.2 Operational Impacts

Long-term operational GHG emissions attributable to the Project are identified in Table 4.8-2 as compared to the existing baseline. The difference in annual GHG emissions are compared to CAPCOA's 900 metric tons of CO_2e per year numeric threshold.

Table 4.8-2. Operational-Related Greenhouse Gas Emissions

Emissions Source	CO_2e (Metric Tons/ Year)
Existing Baseline	
Area Source Emissions	0
Energy Source Emissions	82
Mobile	148
Solid Waste Emissions	62

Emissions Source	CO_2e (Metric Tons/ Year)
Water Emissions	20
Total Emissions:	**312**
Proposed Project	
Area Source Emissions	0
Energy Source Emissions	108
Mobile	150
Solid Waste Emissions	86
Water Emissions	21
Total Emissions:	**365**
Emissions Difference from Baseline	
Area Source Emissions	0
Energy Source Emissions	+26
Mobile (automotive)	+2
Solid Waste Emissions	+24
Water Emissions	+1
Total Emissions:	**+53**
CAPCOA Threshold	*900*
Exceed Threshold?	**No**

CalEEMod version 2020.4.0. Refer to *Appendix B* for Model Data Outputs.

As shown in Table 4.8-2, operational-generated emissions would be generated at rates moderately higher compared to current operations. This is mainly due to a minor increase in daily vehicle trips as well as an increase in building footprints. The Project would not exceed CAPCOA's significance threshold of 900 metric tons annually. This impact is **less than significant**.

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

No impact.

Adopted in February 2014, the Butte County CAP is a strategic plan that implements direction established by the Board of Supervisors in the General Plan and reduces emissions in a manner consistent with California guidelines and regulations (the County is currently in the process of updating the 2014 CAP). Consistent with the State of California, the County's CAP identifies a goal to reduce 2020 GHG emissions to 15 percent below baseline 2006 levels and 42 percent reduction below baseline 2006 levels in 2030. As

discussed previously, the Proposed Project generated GHG emissions would not surpass GHG significance thresholds, which were prepared with the purpose of complying with these requirements. Additionally, the proposed new facilities are intended to be designed to achieve a minimum LEED Silver certification, which would be consistent with Goal 8, *Construct New Buildings to CALGreen Tier 1 Standards*, of the CAP. Therefore, the Project would comply with the Butte County CAP, and would not conflict with an applicable plan intended to reduce GHG emissions. As such, **no impact** would occur.

4.8.3 Mitigation Measures

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

4.9 Hazards and Hazardous Materials

This section is based in part on the results of the *Hazardous Materials Survey Final Report* (2020a) conducted by Entek Consulting Group, Inc. for the Project site, included with this Draft IS/MND as *Appendix G*. The onsite inspection was conducted by Mr. Ryan Metzen from August 24 through September 2, 2020. Mr. Metzen is a State Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) Certified Asbestos Consultant (CAC) and a State of California Department of Public Health (CDPH) certified Lead Inspector/Assessor. *Addendum #1 to Hazardous Materials Report, Asbestos Bulk Sample Results* (2020b) was completed by Entek to further evaluate asbestos content in the existing CCC administration building. The Addendum is included as Attachment A of *Appendix G*.

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, § 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 22 CCR § 662601.10 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.

Transporters of hazardous waste in California are subject to many federal and state regulations. They must register with the California Department of Health Services (DHS) and ensure that vehicle and waste container operators have been trained in the proper handling of hazardous waste. Vehicles used for the transportation of hazardous waste must pass an annual inspection by the California Highway Patrol (CHP).

Transporters must allow the CHP and/or the DHS to inspect its vehicles and must make certain required inspection records available to both agencies. The transport of hazardous materials that are not wastes is regulated by the U.S. Department of Transportation through national safety standards.

Other risks resulting from hazardous materials include the use of these materials in local industry, businesses, and agricultural production. The owner or operator of any business or entity that handles a hazardous material above threshold quantities is required, by state and federal laws, to submit a business plan to the local Certified Unified Program Agency (CUPA). The Butte County Public Health Department is designated by the State Secretary for Environmental Protection as the CUPA for Butte County in order to focus the management of specific environmental programs at the local government level. As a CUPA, Butte County Public Health Department manages six hazardous material and hazardous waste programs. The CUPA program is designed to consolidate, coordinate, and uniformly and consistently administer permits, inspection activities, and enforcement activities throughout Butte County. This approach strives to reduce overlapping and sometimes conflicting requirements of different governmental agencies independently managing these programs. Large cases of hazardous materials contamination or violations are reported to the Central Valley RWQCB (Region 5) and the California Department of Toxic Substances Control (DTSC). It is not at all uncommon for other agencies, such as federal and state Occupational Safety and Health administrations, to become involved when issues of hazardous materials arise.

Under Government Code Section 65962.5, both the DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. The Project site is not listed by the DTSC or SWRCB as a hazardous substances site on the list of hazardous waste sites compiled pursuant to Government Code § 65962.5 (Cortese List).

4.9.1.1 Project Site

The Project site is a fire base located at 6640 Steiffer Road in Magalia, Butte County. The fire base regularly handles hazardous materials including fuels, solvents, and lubricants. The 84.1-acre site is located adjacent to Paradise Lake; however, the Proposed Project involves work on approximately 39.39 acres within the most heavily developed portions of the site. The Project site is bounded to the west and south by heavily forested land and to the north and east by Paradise Lake. Most of the existing facility is located 1,000 feet or more from the water's edge. The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp.

4.9.1.2 Asbestos

The USEPA, National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61, requires an owner or operator of a demolition or renovation project to thoroughly inspect the affected facility or part of the facility where the demolition or renovation operation will occur for the presence of asbestos-containing materials (ACM) prior to the commencement of that project. Entek, using architectural drawings, conducted a survey of the structures between August 24 and September 2, 2020 (see Table 2.3-1 for buildings to be demolished). The results of testing for asbestos during Entek's survey indicate ACM is

present in multiple materials in several structures to be demolished, including the abandoned building, both administration buildings, Captain's and crew barracks, greenhouse, laundry building, training building, warehouse shop building, and various garages/sheds.

4.9.1.3 Naturally Occurring Asbestos

Asbestiform minerals belonging to the serpentine or amphibole mineral groups are found in many areas throughout California and are abundant in the Sierra Foothills. They are commonly exposed near faults within ultramafic or serpentine rock. Activity in areas with asbestos-containing rock or soil may create dust emissions containing asbestos fibers, especially when bedrock is exposed to the air. All types of asbestiform minerals are considered hazardous with no safe exposure level established for non-occupational exposures. Though exposure to low levels of asbestos for short periods of time is thought to pose minimal risk, asbestos fibers can penetrate body tissues and remain in the lung or abdominal areas for a long time. According to the California State Geoportal (2021), the nearest potential existence of naturally occurring asbestos (NOA) is approximately 1.5 miles south of the Project site. Entek advises the following about the Project site, "This area of California has been noted to also contain veins of NOA in the soil" (Entek 2020a).

4.9.1.4 Lead-Based Paint

Entek also investigated existing paints, applied coatings, and glazed ceramic tiles in an effort to determine if lead was present in these materials. If a material contains more than 5,000 ppm or 1.0 mg/cm^2 lead, it is classified as lead-based paint (LBP). If more than 100 sf of these paints, coatings, or glazed ceramic tiles are impacted by a *trigger task*, prior notification to Cal/OSHA will be required. If paints or applied coatings were determined to contain lead in amounts less than 5,000 ppm, they are classified as lead containing paint (LCP). Any work designated by Cal/OSHA as a *trigger task* that will impact these paints, coatings, or materials must be done by properly trained personnel, in compliance with all lead-related Cal/OSHA regulations and requirements. Entek found LCPs in the following structures: abandoned building, both administration buildings, Captain's and crew barracks, fueling station, laundry building, shop building, training building, warehouse, and various garages/sheds.

4.9.2 Regulatory Setting

4.9.2.1 National Emission Standards for Hazardous Air Pollutants

CARB has been given authority for enforcement of the NESHAP regulations. A demolition is the wrecking, taking out, or burning of any load supporting structural member. A renovation is any other structure modification. Ten-day written notification to the USEPA Region IX and CARB is required prior to the performance of any demolition project regardless of asbestos being present or not. This notification would also apply to any renovation project, which involves the wrecking, taking out, or burning of any load bearing structural member during a renovation.

There is a sufficient amount of ACM present to require that a 10-day notification to USEPA Region IX and CARB be submitted prior to starting work, which will impact materials identified as regulated asbestos-containing material (RACM) or CAT-I and CAT-II materials, if they are made friable. If more than 160

square feet, 260 linear feet, or 35 cubic feet of RACM is planned for removal on the Project, formal written notification to EPA Region IX and CARB is required.

4.9.2.2 Cal/OSHA

Asbestos Containing Materials

Disturbance of any ACM or asbestos-containing construction material (ACCM) could generate airborne asbestos fibers and would be regulated by Cal/OSHA. Cal/OSHA worker health and safety regulations apply during any disturbance of ACM or ACCM by a person while in the employ of another. Cal/OSHA uses the term ACCM to indicate a manufactured construction material that contains greater than 0.1 percent asbestos by weight by the polarized light microscopy (PLM) method. This definition can be found in Title 8, 1529. This is true regardless of friability or quantity disturbed. Because it has been estimated that more than 100 sf of ACCM exists and will be impacted during the Project, a licensed asbestos contractor (C-22) registered with Cal/OSHA is required to perform the asbestos-related removal. Entek recommends a licensed asbestos contractor be used to remove ACCM even if less than 100 sf of ACCM is being disturbed.

For compliance with Title 8, Section 341.9, the asbestos contractor must send written notice at least one day (24 hours) prior to start of any work which will impact any amount of asbestos to the local office for Cal/OSHA and perform all work in accordance with Cal/OSHA requirements.

Lead Based Paint

Any project that may result in the disturbance of lead containing products or surfaces, but is not intended to remediate a lead hazard or specifically designed to remove LBP to reduce or eliminate a known hazard, would be considered *lead related construction work*. Lead related construction work means any "construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup, that, by using or disturbing lead-containing material or soil, may result in significant exposure of adults or children to lead" (Title 17, California Code of Regulations, Division 1, Chapter 8, Article 1).

Lead-related construction work does not fit the classification of a *lead abatement project* under CDPH Title 17 regulations. *Abatement* is defined in Title 17, Division 1, Chapter 8, Article 1 as:

> "any set of measures designed to reduce or eliminate lead hazards or LBP for public and residential buildings, but does not include containment or cleaning."

A lead hazard is defined in Title 17, Division 1, Chapter 8, Article 1 as

> "deteriorated LBP, lead contaminated dust, lead contaminated soil, disturbing LBP or presumed LBP without containment, or any other nuisance which may result in persistent and quantifiable lead exposure."

Cal/OSHA has not established a concentration of lead in a product where their regulations do not apply; therefore, any disturbance to products containing lead fall under the jurisdiction of Cal/OSHA and their regulations. Disturbance of paints/coatings or materials determined to be LBP may trigger a pre-work

notification to Cal/OSHA if a "*trigger task*" disturbs 100 square feet or more of those paints/coatings or materials. Trigger tasks are described in Title 8 CCR 1532.1.

4.9.3 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 with mitigation incorporated.

4.9.3.1 Construction

Asbestos Sampling

There were several materials observed by Entek that are considered *suspect* under USEPA guidelines. Under current USEPA guidelines for conducting building inspections for ACM, all *suspect* materials must be assumed to contain asbestos until otherwise determined by laboratory testing.

The samples of materials suspected of containing asbestos were submitted to Asbestech Laboratory, located in Carmichael, California. These samples were subsequently analyzed by PLM with dispersion staining. The USEPA NESHAP uses the terms RACM, Category I, and Category II, when identifying materials which contain asbestos in amounts greater than 1 percent. All samples found to contain less than 1 percent asbestos by PLM analysis that are not identified as containing more than 1 percent asbestos, classified as RACM, CAT-I, or CAT-II materials were additionally analyzed using the 400 point count method with analysis by PLM. This additional analysis is required by NESHAP and enforced by CARB. A total of 371 bulk samples were collected of all the *suspect* materials that were observed during this investigation. Many of those samples contained multiple layers, which were individually analyzed to determine their asbestos content. Analysis of all samples collected was by PLM with dispersion staining. Results of the analysis are listed in *Appendix G*.

Compliance

Implementation of Mitigation Measure **HAZ-1** would ensure Proposed Project compliance with all recommendations outlined in the *Hazardous Materials Survey*, including NESHAP regulations and Cal/OSHA guidelines for ACCM and LBP. Because of this compliance, impacts related to disposal of hazardous materials would be **less than significant with mitigation incorporated**.

4.9.3.2 Operations

Existing fuel tanks are specifically designed and certified for the purpose of fuel storage. Routine transportation of fuels would occur in order to refill the tanks. Transportation of these fuels would be via approved fuel transport trucks that have been licensed specifically for this purpose. The transport of hazardous materials by truck is regulated by federal safety standards under the jurisdiction of the U.S.

Department of Transportation. The CHP is responsible for tanker truck inspections and permitting within the state. Because of existing requirements for the use, transport, and disposal of propane, diesel, and gasoline, the potential for significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous fuels is less than significant.

CAL FIRE and the CCC would comply with all federal, state, and local regulations regarding the storage of hazardous waste and all onsite hazardous waste handling and storage would occur within the specially designed hazardous waste storage building which would be equipped with secondary containment.

Other hazardous material use may include lubricants, fuels, and solvents in relatively small quantities. Because all on- and offsite storage and use of hazardous materials would be conducted consistent with applicable regulations, use of these materials would not create a significant hazard to the public and impacts would be **less than significant**. No mitigation would be required.

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 with mitigation incorporated.

Hazardous materials such as diesel fuel and oil would be used during demolition, construction, operation, and maintenance at the Project site. The release of any hazardous substance to the environment would be prevented through the implementation of BMPs listed in the SWPPP and a Spill Prevention, Control and Countermeasure (SPCC) Plan. As described in the above discussion under a), routine use, storage, and handling of hazardous substances would be conducted in accordance with applicable federal, state, and local regulations. Hazards related to building and vehicle maintenance materials would be present at the Project site.

Because of existing requirements for the use, transport, and storage of diesel and gasoline, the potential for significant hazards to the public, construction workers, and environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be reduced to a less than significant impact.

Additionally, while there are no previous findings of NOA in the Project area, there are potential NOA deposits within Butte County (California State Geoportal 2021; Van Gosen 2011). NOA is successfully kept in the ground by keeping fill on top of ultramafic bedrock and by keeping exposed fill wet and dust-free. The Project geologist and construction manager would prevent potential NOA from becoming airborne by minimizing prolonged exposure of uncovered earth in multiple areas, thereby not allowing wind to entrain the soil. Additionally, implementation of **HAZ-2** would prevent airborne dust and reduce impacts to **less than significant with mitigation incorporated**.

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.

Cedarwood Elementary School is the nearest school to the Project site and is located approximately a 0.5 mile to the west. There would be **no impact**. No mitigation would be required.

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.

ECORP conducted a search of the DTSC's Hazardous Waste and Substance List (Cortese List), EnviroStor online database, and the SWRCB's GeoTracker online database for the Project area and did not identify any potential or confirmed active state or federal Superfund sites located within or immediately adjacent to the Project site. Therefore, the Proposed Project would not be located on a site included on a list of hazardous material sites. **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 for people residing or working in the project area?	☐	☐	☐	☒

No impact.

There are no airports within two miles of the Project area. Due to the distance of the Project area from the nearest public or public use airport, no hazards to people residing or working in the Project area would exist. **No impact** would occur.

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

Less than significant impact.

The Butte County Office of Emergency Management's *Emergency Operations Plan* (2011) sets forth policies to address and respond to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies affecting the Butte County Operational Area. Construction of the Proposed Project would not interfere with the Butte County emergency response and recovery plans and would enhance ability to respond to emergency situations locally. The BFC would remain operational during construction. A **less than significant** impact would occur.

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

According to the *Draft Fire Hazard Severity Zones in State and Local Responsibility Area Maps* published by CAL FIRE in 2007, the Project site is classified as Moderate Fire Hazard Severity Zone (FHSZ). However, the site is immediately surrounded in all directions by a Very High FHSZ. The Very High FHSZ is the western edge of the Plumas National Forest, which is managed by several state and federal entities, including the USFS, BLM, and CAL FIRE. The Proposed Project will allow the BFC to better serve these areas and the facility will remain operational during construction. In addition, removal of over 800 trees in proximity to the onsite facilities will improve the defensible space in comparison to current conditions. As described in the Project Description, the facility is designed and equipped to respond to both natural and humanmade disasters (including fire). Therefore, the Proposed Project will have a **less than significant** impact on increasing the wildfire risk within the area or further exposing people or structures to additional significant risk of loss, injury, or death involving wildland fires.

4.9.4 Mitigation Measures

HAZ-1: Hazardous Materials Survey Compliance

- The Proposed Project shall comply with all recommendations outlined in the *Hazardous Materials Survey*, as well as all pertinent NESHAP regulations and Cal/OSHA guidelines regarding the proper removal and disposal of hazardous materials from the Project site.

HAZ-2: Dust Prevention

- The Project geologist shall prevent potential NOA from becoming airborne by minimizing prolonged exposure of uncovered earth in multiple areas. If ultramafic rock is or must become exposed to the air, then the following procedures must be put into effect. Water support, in the form of a water truck or mobile storage tank, shall be used in regular intervals to keep the open earth area wet and dust free. Proper signage noting the possibility of NOA and required PPE shall be posted in the area. PPE including coveralls and respirators shall be worn by all workers in the area. These procedures shall be followed as long as ultramafic rock is exposed and can be terminated when the rock is again covered with fill.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Regional Hydrology

The majority of Butte County's groundwater resources are located within the Sacramento Valley groundwater basin. The principal groundwater sub-basins within the Sacramento Valley basin portion of Butte County are Vina, West Butte, East Butte, and North Yuba. The Project area is situated east of the Vina sub-basin and drains to the Sacramento River water basin by way of Paradise Lake, Little Butte Creek, Magalia Reservoir, and Butte Creek.

The Sacramento Valley groundwater basin lies between the Coast Range to the west, the Cascade and Sierra Nevada ranges to the east and extends from Red Bluff in the north to the Delta in the south, covering 4,900 square miles. It covers parts of Sacramento, Placer, Solano, Yolo, Yuba, Colusa, Tehama, Glenn, and Butte counties, and is the major source of groundwater in Butte County (Department of Water Resources [DWR] 2000).

4.10.1.2 Site Hydrology and On-Site Drainage

The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. Retaining walls will be needed to provide level building pads at several locations throughout the camp. A new 55,552-sf retention basin is proposed north of the multi-purpose and garage apparatus buildings, in the same location as the existing retention basin. The basin is designed to store stormwater runoff from the site due to a 100-year storm event. Any excess water will be directed to a designed overflow where water will flow through cobble and sheet flow following existing drainage patterns. The Project site would otherwise maintain existing grades.

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

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

Less than significant impact.

The majority of the precipitation for the area occurs during the winter months; however, adverse storm events can also occur outside of the winter. During construction of the Proposed Project, impacts to water resources could occur without proper controls to protect water quality and reduce impacts to soil erosion. Soil can be loosened during demolition, fill and grading, paving, and tree removal processes. Loosened soils and spills of fluids or fuels from construction vehicles and equipment or miscellaneous construction materials and debris could degrade surface and ground water quality. A heavy rainfall event could cause pollutants to flow offsite and reach nearby surface water drainage features. The Project area impacted would be more than one acre, making the Proposed Project subject to the requirements of the statewide NPDES storm water permit for construction (Order 98-08-DWQ). A SWPPP, a required element of the NPDES, includes a listing of BMPs to prevent construction pollutants and products from violating water quality standards or waste discharge requirements. A SWPPP would be required for the Proposed Project. Stormwater BMPs might include both underground infiltration and vegetated swales.

Additionally, all operational activities would be performed consistent with water quality regulations and all hazardous material special use areas would be designed to protect against surface and groundwater contamination. CAL FIRE would comply with all federal, state, and local regulations regarding the storage of hazardous waste and all onsite hazardous waste storage would occur within the specially designed hazardous waste storage building, which would be equipped with secondary containment. Therefore, the Proposed Project will have a **less than significant** impact on water quality. No mitigation is required.

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

Less than significant impact.

The Del Oro Water Company currently provides service to the BFC and the water main located in Steiffer Road is sufficient to continue serving the site. The Project site is part of the Magalia District, which gets its water from a combination of groundwater and surface water resources. Project implementation would not result in a significant increase of impervious surfaces on the site. A new retention basin will be installed as

part of the Project and will be located in the same area as the existing retention basin, north of the proposed multi-purpose and apparatus buildings. The new retention basin will be approximately 55,552 sf. The basin will be designed to store stormwater runoff from the site due to a 100-year storm event. Any excess water will be directed to a designed overflow where water will flow through cobble and sheet flow following existing drainage patterns. A previously abandoned septic system will be removed as needed for installation of the proposed retention basin. The Proposed Project would not substantially increase the amount of impervious surface regionally nor substantially interfere with groundwater recharge. In addition, the Project would not result in substantial increase in water demand over existing conditions. As such, the Proposed Project would have a **less than significant** impact on groundwater. No mitigation is required.

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.

The Proposed Project will not substantially alter the existing drainage pattern of the site; however, improvements to the drainage system will be made to better convey and retain stormwater runoff. Site drainage would be designed for a 100-year storm event and therefore would not exceed the capacity of downstream existing or planned drainage systems. The Proposed Project will have a **less than significant** impact to flood flows. No mitigation is required.

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

Less than significant impact.

The Project site is not located in an area protected by levees. According to the Federal Emergency Management Agency Flood Map Service Center, the Project site is located in Zone X (area of minimal flood hazard). Additionally, the Project site is located inland, and not within a seiche, tsunami, or mudflow hazard area. A **less than significant** impact would occur. No mitigation is required.

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

No impact.

As stated above, the Proposed Project would be required to comply with SWPPP and NPDES regulations and would not obstruct or conflict with water quality control or sustainable groundwater management plans. There would be **no impact** and no mitigation is required.

4.10.3 Mitigation Measures

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

4.11 Land Use and Planning

4.11.1 Environmental Setting

The Project site is located at 6640 Steiffer Road near the unincorporated town of Magalia and is designated Public in the Butte County General Plan. The Project site is bounded to the west and south by heavily forested land and to the north and east by Paradise Lake. Additionally, there are some rural residences and retail uses to the south and west. Most of the existing facility is located 1,000 feet or more from the water's edge. The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. The Project site is currently operated as a CAL FIRE/CCC joint facility, and that use will remain after the completion of the Proposed Project.

The State of California and state-owned land, such as the CAL FIRE parcel, are not subject to local city or county land use and zoning regulations. However, the state is subject to the requirement under CEQA to

assess Project-related impacts that may occur as a result of conflicts between existing and proposed land uses.

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

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

No Impact.

Projects such as a railroad line, major highway, or water canal may result in physically dividing an established community by removing existing roadway connections, walkways and bike paths and other types of links between community areas. This may result in the division of an existing community by removing those connections. The Proposed Project involves upgrading an existing CCC/CAL FIRE facility on the same site. No removal of roadways or other connections to the surrounding community would occur. **No impact** will occur, and no mitigation is required.

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 State of California and state-owned land, such as a CAL FIRE facility, are not subject to local city or county land use and zoning regulations. Although the state is not subject to local land use and zoning regulations, local land use regulations were considered in this IS/MND. The Project as proposed does not conflict with any local regulations. Therefore, the Proposed Project would have **no impact** in this area. No mitigation is required.

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

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Minable minerals or an 'ore deposit' is defined as a deposit of ore or minerals having a value materially in excess of the cost of developing, mining, and processing the mineral

and reclaiming the Project area. The conservation, extraction, and processing of those mineral resources is essential to meeting the needs of society.

There are currently 20 mines with permits to operate in Butte County. The County's predominant mining products are aggregate resources and stone. Aggregate resources such as sand and gravel are used extensively in all types of construction, including residential, commercial, industrial, roads and highways, dams, and bridges. There are three categories of rock and aggregate resource operations in Butte County:

- in-channel resources, comprising Quaternary gravel present in stream channels,
- off-channel resources or terraces, comprising sands and gravels, which have been overlaid by soils located adjacent to or within an active or ancient floodplain, and
- hard-rock operations, comprising consolidated rock materials from higher elevation mountains. The hard-rock mining facilities now operating in Butte County include Bangor Rock Quarry and the Table Mountain Quarry (Butte County 2010).

Gold is also mined in Butte County; the main form of gold mining in the county has been placer mining, although underground mining took place historically. Placer mining involves removing the surface gold-bearing gravels, and either washing or chemically extracting the gold ore from the gravel. There are no permitted placer mines in Butte County, although suction dredge mining regulated by the CDFW occurs within the county's creeks and rivers. In addition, buried placer deposits can be obtained through drift mining, which involves digging into the ground and tunneling horizontally to extract the gravels. Buried placer deposits are located throughout the county and are not easily identified. Another kind of gold mining is lode mining, which often involves open pit mines and blasting mountains to expose deep veins of gold. Examples of lode gold mines in Butte County include the Blue Lead, Ohio Dix, and Carr mines (Butte County 2010).

4.12.2 Regulatory Setting

4.12.2.1 Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act of 1975 (SMARA) states that cities and counties must adopt an ordinance(s) "which establishes procedures for the review and approval of reclamation plans and the issuance of a permit to conduct surface mining operations" (PRC Section 2774). The intent of this legislation is to ensure the prevention or mitigation of the adverse environmental impacts of mining, the reclamation of mined lands, and the production and conservation of mineral resources are consistent with recreation, watershed, wildlife, and public safety objectives (PRC Section 2712).

SMARA requires the State Geologist to classify land into Mineral Resource Zones (MRZs) , according to the known or inferred mineral potential of that land. The process is based solely on geology, without regard to existing land use or land ownership. The primary goal of mineral land classification is to ensure that the mineral potential of land is recognized by local government decision makers and considered before land use decisions, which could preclude mining, are made. Areas subject to California mineral land classification studies are divided into MRZ categories that reflect varying degrees of mineral potential:

- MRZ-1: Areas of no mineral resource significance
- MRZ-2: Areas of identified mineral resource significance
- MRZ-3: Areas of undetermined mineral resource significance
- MRZ-4: Areas of unknown mineral resource significance

Public or private entities can petition the State Mining and Geology Board (SMGB) to classify specific lands that contain significant mineral deposits and that are threatened by land use incompatibilities.

4.12.2.2 Butte County General Plan 2030

Goals, Programs, and Policies that are applicable to the Proposed Project are listed below.

Goal COS-12: Protect economically viable mineral resources and related industries while avoiding land use conflicts and environmental impacts from mining activities.

Policy COS-P12.3: Permitted uses on lands containing and adjacent to important mineral resources shall be restricted to those compatible with mineral extraction, except in cases where such uses offer public benefits that outweigh those of resource extraction

4.12.3 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.

According to Mineral Land Classification maps located on the DOC website, the Project site is not located in an MRZ. The Proposed Project would not 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. There are no mining activities being conducted on or near the site and no mining activities are planned for the site. Therefore, **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 Proposed Project would not 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, because no mining operations exist on or adjacent to the Project site (Butte County 2012). The Project site is currently used as a fire center and emergency response base and will remain so following Project implementation. Therefore, **no impact** would occur.

4.12.4 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 equivalent noise level [L_{eq}]) and the average daily noise levels/community noise equivalent level (in day-night average sound level [L_{dn}]/ Community noise equivalent level [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-A-weighted decibel (dBA) *weighting* added to noise during the hours of 10:00 p.m. to 7:00 a.m. 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 p.m. to 10:00 p.m. and a 10-dBA weighting added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source (USEPA 1971). 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).

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). The following relationships should be noted in understanding this analysis regarding increases in dBA:

- A change of one dBA cannot be perceived by humans except in carefully controlled laboratory experiments.
- A three-dBA change is considered a just-perceivable difference outside of the laboratory.
- A change in level of at least five dBA is required before any noticeable change in community response would be expected. An increase of five dBA is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Noise Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as hospitals, historic sites, cemeteries, and certain recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

The nearest existing noise-sensitive land uses to the Project site are rural single-family residences with the closest being approximately 200 feet distant from the southern Project site boundary.

4.13.1.2 Vibration Fundamentals

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

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

4.13.1.3 Existing Ambient Noise Environment

The most common and significant source of noise in Butte County is mobile noise generated by transportation-related sources. Other sources of noise are the various land uses (i.e., industrial facilities, agricultural uses, residential and commercial) that generate stationary-source noise. The Project site is located in a rural area of Butte County adjacent to Paradise Lake. The noise environment in the Proposed Project area is mainly impacted by mobile sources of noise, especially cars and trucks on area roadways such as Steiffer Road.

The Project site is located outside of any airport land use plan. Furthermore, the Project site is located beyond two miles from any airport. The Chico Municipal Airport, located approximately 15 miles west, is the closest airport to the Project site. Thus, the ambient noise environment of the Project area is not heavily influenced by aircraft noise.

4.13.1.4 Existing Ambient Noise Measurements

The Project site is the active BFC occupied by the CCC and CAL FIRE. It contains numerous buildings and associated features, many of which are proposed for demolition and reconstruction. In order to quantify existing ambient noise levels in the Project area, ECORP conducted three short-term noise measurements on August 8, 2021. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to the Project site during the daytime (*Appendix H*). The 15-minute measurements were taken between 10:17 a.m. and 11:18 a.m. Short-term (L_{eq}) measurements are considered representative of the noise levels throughout the day. The average noise levels and sources of noise measured at each location are listed in Table 4.13-1

Table 4.13-1. Existing (Baseline) Noise Measurements

Location Number	Location	L_{eq} dBA	Lmin dBA	Lmax dBA	Time
1	Intersection of Cory Road and Steiffer Road.	**50.1**	27.3	74.3	10:17 a.m. – 10:32 a.m.
2	Intersection of Imperial Way and Goldcone Drive	**43.5**	31.9	63.3	11:03 a.m. – 11:18 a.m.
3	Steiffer Road adjacent to the entrance to Cedarwood Elementary School.	**53.7**	34.8	76.2	10:39 a.m. – 10:54 a.m.

Source: Measurements were taken by ECORP with a Larson Davis SoundExpert LxT precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. The SoundExpert LxT sound level meter was calibrated prior to the measurements according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See *Appendix H* for noise measurement outputs.

As shown in Table 4.13-1, the ambient recorded noise levels range from 43.5 to 53.7 dBA L_{eq} near the Project site. The most common noise in the Project vicinity is produced by automotive vehicles (e.g., cars, trucks, buses, motorcycles) on area roadways. Traffic moving along the streets produces a sound level that remains relatively constant and is part of the Project area's minimum ambient noise levels. Vehicular noise varies with volume, speed, and type of traffic. Slower traffic produces less noise than fast moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, trains, garbage and construction vehicle activity and honking of horns. There noises add to urban noise and are regulated by a variety of agencies.

4.13.2 Regulatory Setting

4.13.2.1 Butte County General Plan Health and Safety Element

The Project site is located in Butte County and therefore would potentially affect receptors within the county from onsite and offsite sources. The County Health and Safety Element of the General Plan is a comprehensive program for including noise management in the planning process, providing a tool for planners to use in achieving and maintaining land uses that are compatible with existing and future environmental noise levels. The Health and Safety Element identifies noise-sensitive land uses and noise sources and defines areas of noise impact for the purpose of developing programs to ensure that residents, and other noise sensitive land uses, in Butte County will be protected from excessive noise intrusion. The Health and Safety Element contains Policies that must be used to guide decisions concerning land uses that are common sources of excessive noise levels. The following relevant and applicable policies from the County's Health and Safety Element have been identified for the Project:

Policy HS-P1.6: Applicants proposing a new noise-producing development project near existing or planned noise-sensitive uses shall provide a noise analysis prepared by an acoustical specialist with recommendations for design mitigation.

Policy HS-P1.7: Applicants for discretionary permits shall be required to limit noise generating construction activities located within 1,000 feet of residential uses to daytime hours between 7:00 a.m. and 6:00 p.m. on weekdays and non-holidays.

Policy HS-P1.7: The following standard construction noise control measures shall be required at construction sites in order to minimize construction noise impacts:*

- Equip all internal combustion engine driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction project area.
- Utilize quiet air compressors and other stationary noise generating equipment where appropriate technology exists and is feasible.*

4.13.2.2 Butte County Code of Ordinances

Butte County's regulations with respect to noise are included in Chapter 41A, *Noise Control*, of the Code of Ordinances. This chapter provides exterior and interior noise standards for noise sensitive land uses. Exterior standards are presented in Table 4.13-2.

Table 4.13-2. Exterior Noise Standards

	Daytime (7:00 a.m. to 7:00 p.m.)		**Evening (7:00 p.m. to 10:00 p.m.)**		**Nighttime (10:00 p.m. to 7:00 a.m.)**	
Designation						
Noise Level Descriptor	**Urban**	**Non-Urban**	**Urban**	**Non-Urban**	**Urban**	**Non-Urban**
Hourly Average (L_{eq})	55	50	50	45	45	40
Maximum (L_{max})	70	60	60	55	55	50

Source: Butte County 2021

Interior standards are presented in Table 4.13-3.

Table 4.13-3. Interior Noise Standards

Noise Level Descriptor	**Daytime (7:00 a.m. to 7:00 p.m.)**	**Evening (7:00 p.m. to 10:00 p.m.)**	**Nighttime (10:00 p.m. to 7:00 a.m.)**
Hourly Average (L_{eq})	45	40	35
Maximum (L_{max})	60	55	50

Source: Butte County 2021

Additionally, Section 41A-9, *Exemptions*, exempts noise associated with construction, repair, remodeling, demolition, paving or grading within 1,000 feet of a residential use provided said activities do not take place between the following hours:

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

4.13.3 Noise (XIII) Environmental Checklist and Discussion

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

Less than significant impact.

4.13.3.1 Project Construction

Construction noise associated with the Proposed Project would be temporary and would vary depending on the nature of the activities being performed. Noise generated would primarily be associated with the operation of 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., land clearing, grading, excavation, paving). Noise generated by construction equipment, including earth movers, material handlers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site.

The nearest existing noise-sensitive land uses to the Project site are rural single-family residences with the closest being approximately 200 feet distant from the southern Project site boundary. However, it is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the Project site and at various distances from sensitive receptors. Therefore, this analysis employs Federal Transit Administration (FTA) guidance for calculating construction noise, which recommends measuring construction noise produced by all

construction equipment operating simultaneously from the center of the Project site (FTA 2018), which in this case is 1,300 feet from the nearest sensitive receptor. The County's General Plan Public Health and Safety Element prohibits the time that construction can take place (Section 4.13.2) but does not promulgate a numeric threshold pertaining to the noise associated with construction. This is due to the fact that construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project.

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

The anticipated short-term construction noise levels generated for the necessary construction equipment are presented in Table 4.13-4.

Table 4.13-4. Construction Average (dBA) Noise Levels at Nearest Receptor

Equipment	Estimated Exterior Construction Noise Level at Existing Residences	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Timber Harvest			
Harvester	49.4	*85*	**No**
Forwarder	49.4	*85*	**No**
Chipper	48.4	*85*	**No**
Loader	46.8	*85*	**No**
Timber Haulers (4)	44.2 (each)	*85*	**No**
Chip Haulers (3)	44.2 (each)	*85*	**No**
Mob/Demob Transports (4)	51.7 (each)	*85*	**No**
Pickup Vehicles (4)	42 (each)	*85*	**No**
Combined Timber Harvest Equipment	**60.5**	*85*	**No**

Equipment	Estimated Exterior Construction Noise Level at Existing Residences	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Phase 1 Demolition			
Concrete/Industrial Saws	54.3	*85*	**No**
Excavator (3)	48.4 (each)	*85*	**No**
Rubber Tired Dozers (2)	49.4 (each)	*85*	
Combined Demolition Equipment	**58.1**	*85*	**No**
Phase 1 Site Preparation			
Rubber Tired Dozers (3)	49.4 (each)	*85*	**No**
Tractors/Loaders/Backhoes (4)	51.7 (each)	*85*	**No**
Combined Site Preparation Equipment	**59.3**	*85*	**No**
Phase 1 Grading			
Excavator	48.4	*85*	**No**
Grader	52.7	*85*	**No**
Rubber Tired Dozers	49.4	*85*	**No**
Tractors/Loaders/Backhoes (3)	51.7 (each)	*85*	**No**
Combined Grading Equipment	**59.0**	*85*	**No**
Phase 1 Building Construction, Paving & Architectural Coating			
Crane	44.3	*85*	**No**
Forklifts (3)	51.1 (each)	*85*	**No**
Generator Sets	49.3	*85*	**No**
Tractors/Loaders/Backhoes (3)	51.7 (each)	*85*	**No**
Welders	41.7	*85*	**No**
Pavers (2)	45.9 (each)	*85*	**No**
Paving Equipment (2)	45.9 (each)	*85*	**No**
Roller (2)	44.7 (each)	*85*	**No**
Compressor (air)	45.4	*85*	**No**
Combined Building Construction, Paving & Architectural Coating Equipment	**60.8**	*85*	**No**
Phase 2 Demolition			
Concrete/Industrial Saws	54.3	*85*	**No**
Excavator (3)	48.4 (each)	*85*	**No**
Rubber Tired Dozers (2)	49.4 (each)	*85*	**No**
Combined Demolition Equipment	58.1		

Equipment	Estimated Exterior Construction Noise Level at Existing Residences	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Phase 2 Site Preparation			
Rubber Tired Dozers (3)	49.4 (each)	*85*	**No**
Tractors/Loaders/Backhoes (4)	51.7 (each)	*85*	**No**
Combined Site Preparation Equipment	**59.3**	*85*	**No**
Phase 2 Grading			
Excavator	48.4	*85*	**No**
Grader	52.7	*85*	**No**
Rubber Tired Dozers	49.4	*85*	**No**
Tractors/Loaders/Backhoes (3)	51.7 (each)	*85*	**No**
Combined Grading Equipment	59.0	*85*	**No**
Phase 2 Building Construction, Paving & Architectural Coating			
Crane	44.3	*85*	**No**
Forklifts (3)	51.1 (each)	*85*	**No**
Generator Sets	49.3	*85*	**No**
Tractors/Loaders/Backhoes (3)	51.7 (each)	*85*	**No**
Welders	41.7	*85*	**No**
Paver (2)	45.9 (each)	*85*	**No**
Paving Equipment (2)	45.9 (each)	*85*	**No**
Roller (2)	44.7 (each)	*85*	**No**
Compressor (air)	45.4	*85*	**No**
Combined Building Construction, Paving & Architectural Coating Equipment	**60.8**	*85*	**No**

Source: Construction noise levels were calculated by ECORP using the FHWA Roadway Noise Construction Model (FHWA 2006). Refer to *Appendix H* for Model Data Outputs. (ECORP 2021e)

Notes: Construction equipment used during construction derived from CalEEMod 2020.4.0. CalEEMod is designed to calculate air pollutant emissions from construction activity and contains default construction equipment and usage parameters for typical construction projects based on several construction surveys conducted in order to identify such parameters. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project site (FTA 2018), which is 1,300 feet from the nearest sensitive receptor. Additionally, Construction, Paving and Architectural Coating phases are assumed to occur simultaneously.

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

As shown in Table 4.13-4, no individual or cumulative pieces of construction equipment would exceed the 85 dBA significance threshold for construction noise during any phase of construction at the nearby noise-sensitive receptors.

Construction Traffic Noise

Project construction would result in minimal additional traffic on adjacent roadways over the time period that construction occurs. According to the CalEEMod model, which is used to predict air pollutant emissions associated with Project construction and contains default usage parameters for typical construction projects, including the number of worker commute trips and material haul truck trips, the maximum number of construction workers and haul trucks traveling to and from the Project site on a single day would be during the site preparation phase with 282 total daily trips (18 worker trips and 264 haul truck trips). The worker trips would largely occur within two distinct segments of the day: the morning and afternoon, while the haul trips would occur intermittently throughout the workday.

According to the California Department of Transportation (Caltrans) *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). The majority of construction-related traffic trips would access the Project via Skyway, an expressway facility within the Project area. The Skyway is the main roadway that provides high-speed access between the rural communities to the north and the more populated communities to the south. Based on the surrounding population, the current activity at the BFC that accommodates approximately 116 average daily vehicle trips under existing conditions and the surrounding land uses, such as Cedarwood Elementary School, that generate numerous daily vehicle trips, it can be assumed that Project construction would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible.

As discussed above, construction noise produced as a result of the Project would result in a **less than significant** impact.

4.13.3.2 Project Operations

Noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest existing noise-sensitive land uses to the Project site are rural single-family residences, with the closest being approximately 200 feet from the southern Project site boundary.

Operational Automobile Traffic Noise

Project operation would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project area. According to Caltrans' *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013a), doubling of traffic on a roadway is necessary in order to result in an increase of 3 dB (a barely perceptible increase, as previously described). According to information in the Project Description, current operations at the BFC accommodates 116 average daily vehicle trips. The Project is estimated to generate approximately 19 new trips per day. This amount of additional traffic would not result in a doubling of traffic on any of the vicinity roadways, and thus the Project's contribution to existing traffic

noise would not be perceptible. Traffic noise as a result of Project operations would be less than significant.

Operational Stationary Noise

The Project is proposing the partial demolition and reconstruction of buildings and associated features at the BFC. The most perceivable noise producing activities that take place on the Project site, such as activities at or in the training facility, warehouse and shop buildings would be similar to current operations. The noise environment at the nearby noise sensitive land uses would remain the same as to what is currently experienced as a result of activities that take place at the BFC. As such, operational noise produced as a result of the Project would result in a **less than significant** impact.

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

Less than significant impact.

4.13.3.3 Construction-Generated Vibration

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 on the Project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is noted that pile drivers would not be necessary during Project construction. Vibration decreases rapidly with distance and it is acknowledged that construction activities would occur throughout the Project site and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with typical construction equipment at 25 feet distant are summarized in Table 4.13-5.

Table 4.13-5. Representative Vibration Source Levels for Construction Equipment

Equipment Type	PPV at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: Caltrans 2020b; FTA 2018

The County does not regulate vibrations associated with construction. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020b) recommended standard of 0.2 inch per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating vibration generated from construction equipment, construction vibration was measured from the center of the Project site (FTA 2018). The nearest structure of concern to the construction site, with regard to groundborne vibrations, is located approximately 1,300 feet southeast of the Project site center.

Based on the representative vibration levels presented for various construction equipment types in Table 4.13-5 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential Project construction vibration levels. The FTA provides the following equation:

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

Table 4.13-6 presents the expected Project related vibration levels at a distance of 1,300 feet.

Table 4.13-6. Construction Vibration Levels at 1,300 Feet

Receiver PPV Levels (in/sec)1					Peak Vibration	Threshold	Exceed Threshold
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jack-hammer	Small Bulldozer	Vibratory Roller			
0.000236	0.000202	0.000093	0.000007	0.000558	**0.000558**	*0.2*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 4.13-5 (FTA 2018). Distance to the nearest structure of concern is approximately 1,300 feet measured from Project site center.

As shown in Table 4.13-6, vibration as a result of construction activities would not exceed 0.2 PPV at the nearest structure. Thus, Project construction would not exceed the recommended threshold. The impact would be **less than significant**.

4.13.3.4 Operation-Generated Vibration

Project operations would not include the use of any large-scale stationary equipment that would result in excessive vibration levels. Therefore, the Project would not result groundborne 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 site is located approximately 15 miles west of the Chico Municipal Airport. According to Exhibit 4F, Appendix D, of the County's *General Plan*, the Project site is located outside of all noise contours for the Chico Municipal Airport. The Proposed Project would not expose people working or residing on the Project site to excess airport noise levels. **No impact** would occur.

4.13.4 Mitigation Measures

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

4.14 Population and Housing

4.14.1 Environmental Setting

The Project site will have the same use after the completion of the Proposed Project. The 2020 population of Magalia was approximately 11,476, according to the U.S. Census Bureau (2021). Census data shows the average number of persons per household is 2.48 for the approximately 4,633 households in the area. 78.3 percent of households are owner-occupied. By comparison, Butte County has a population of 219,186, averages 2.57 persons per household across its 85,320 households county-wide and has an owner-occupied housing rate of 59 percent.

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 would neither increase the number of homes nor provide additional offsite infrastructure in the area. **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 people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact.

The Proposed Project would not displace any people or existing housing. CAL FIRE and CCC staff would continue to operate from the existing fire base throughout construction. **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

4.15.1.1 Police Services

The Butte County Sherriff's Department provides for the public safety of the community and serves as part of the emergency response for Magalia. The local substation is located at 14172 Skyway Road in Magalia.

4.15.1.2 Fire Services

The Project site is currently the operational Butte Fire Center, and is located in the CAL FIRE Butte Unit, an emergency response coalition consisting of CAL FIRE, Butte County Fire Department, City of Biggs, City of Gridley, and Town of Paradise Fire Departments. Butte Fire Center provides coverage to Magalia and unincorporated Butte County and the Plumas National Forest.

4.15.1.3 Schools

Cedarwood Elementary School is located 0.5 mile west of the Project site. Magalia Adventist School is one mile northwest. No other schools exist within two miles of the Project site.

4.15.1.4 Parks

There are a few parks in Magalia and two near the Project site, including Loch Lomond Glen Park and Coutolenc Park. See Section 4.16 *Recreation* for more information on Magalia parks.

4.15.1.5 Other Public Facilities

The Butte County Office of Education is located 0.5 mile west of the Project site. The town of Paradise, located 5 miles south of the Project site, maintains several other public facilities.

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.

There will be no substantial adverse impacts associated with the Proposed Project, which will upgrade the existing BFC with the construction of a mostly new facility that would allow the base to continue to provide high-quality fire protection and emergency-response service within the Butte Unit. The Proposed Project does not require an expansion of residential housing and would not induce population growth. **No impact** would occur to public facilities in the area.

4.15.3 Mitigation Measures

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

4.16 Recreation

4.16.1 Environmental Setting

There are two parks in proximity to the Project site. Loch Lomond Glen Park, which features a 10-site campground, swimming hole, and zip line, is located 1 mile west of the Project site. Coutolenc Park, managed by Paradise Park and Recreation District, is located 1.2 miles south; Coutolenc Park features hiking trails and an archery range. Additionally, Magalia Community Park is located 2.6 miles south of the Project site. The park features a frisbee golf course and community center and is run by volunteers.

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 generate a substantial increase in the area population; therefore, it would not significantly increase the use of existing neighborhood or regional parks and recreational facilities. There would be **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 include recreational facilities or require the construction or expansion of recreational facilities. There would be **no impact**.

4.16.3 Mitigation Measures

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

4.17 Transportation

On September 27, 2013, former Governor Edmund (Jerry) Brown, Jr. signed SB 743 into law and started a process that will fundamentally change transportation impact analysis conducted as part of CEQA compliance. The Governor's Office of Planning and Research (OPR) was charged with developing new guidelines for evaluating transportation impacts under CEQA using methods that no longer focus on measuring automobile delay and level of service.

OPR issued proposed updates to the CEQA guidelines in support of these goals in November 2017 and a supporting technical advisory in December 2018. The updates establish vehicle miles traveled (VMT) as the metric for evaluating a project's environmental impacts on the transportation system.

Lead agencies, including CAL FIRE, had until July 1, 2020, to implement these new requirements. Butte County has not yet adopted specific VMT metrics or thresholds of significance for transportation studies. The Butte County Association of Governments (BCAG) presented three options for implementation of VMT thresholds in the *BCAG SB 743 Implementation* (2021):

- Option 1 – Apply the CEQA Guidelines thresholds contained in § 15064.3
- Option 2 – Apply the OPR Technical Advisory thresholds for jurisdictions within a metropolitan planning organization (MPO) boundary.
- Option 3 – Apply a qualitative threshold based on interference with state VMT/GHG reduction goals

The *BCAG SB 743 Implementation* states:

> "Since an impact under CEQA is a change to the existing environment, a starting level for potential thresholds is the baseline. This thinking would support Option 1 and would likely have the strongest evidence basis for making significance determinations. However, many lead agencies and project applicants are not prepared for the changes in CEQA documentation that would likely occur under this option where most projects would have a significant VMT impact. The option also ignores the positive role that VMT plays in the economy and quality of life. Considering the remaining two options, the differences are certainly stark and neither has been tested in the courts.
>
> Option 2 complies with state expectations as expressed through CEQA guidance prepared by OPR and ARB while Option 3 opts for more local control of the threshold. Under Option 3, local land use projects would likely be found to have less than significant VMT impacts because they would not interfere with the state's ability to achieve desired VMT reductions through state actions. This is factual and supported by evidence but involves uncertainty without court validation. Given the litigious nature of CEQA, Option 3 involves more risk associated with CEQA compliance, so Option 2 has generally been accepted by other local jurisdictions throughout the state. Option 2 also has the endorsement of Caltrans as noted in the Vehicle Miles Traveled-Focused Transportation Impact Study Guide, Caltrans, May 2020.
>
> Caltrans recommend(s) use of OPR's recommended thresholds for land use projects. As each lead agency develops and adopts its own VMT thresholds for land use projects, Caltrans will review

them for consistency with OPR's recommendations, which are consistent with the state's GHG emissions reduction targets and CARB's Scoping Plan.

Whatever option a lead agency chooses should be supported by substantial evidence. This includes strengthening the evidence supporting Option 2 and being prepared to explain their rationale and evidence in their environmental documents and when responding to public and agency comments during environmental document reviews."

OPR also recommends that impact analysis be streamlined through Project screening. Projects identified as VMT-reducing or VMT-efficient projects have a presumption of a less than significant impact on VMT, and therefore do not require a full VMT assessment. OPR identifies the following project types as appropriate for screening:

- Projects that generate fewer than 110 daily trips
- Projects located in low-VMT areas
- Projects located in a Transit Priority Area (TPA)
    - TPAs are defined as areas within ½ mile of an existing major transit stop or existing stop along a high-quality transit corridor with headways of 15 minutes of less.
- Projects that are affordable housing developments

4.17.1 Environmental Setting

4.17.1.1 Existing Street Setting

State Route 32

SR-32 connects the Chico area to Interstate 5 in Glenn County and to Lassen County. SR-32 is located west of the Project site, and is only accessible to Magalia residents via Chico.

Skyway Road

Skyway Road or *The Skyway*, as it's known to local residents, extends from Chico to Stirling City. The Skyway is the major County arterial that serves Paradise and the Magalia area, including the Project site. The *Butte County General Plan 2030* states The Skyway "has a limited capacity that could negatively affect evacuation and access by emergency vehicles in the event of a natural disaster."

The Skyway between Chico and Paradise is an expressway in Butte County. Several roadway capacity enhancements are presented in BCAG's *2008-2035 Regional Transportation Plan*, and are outlined in the *Butte County General Plan 2030*. The Skyway provides views to the topographic and geologic features of Butte Creek Canyon. A portion of this canyon is protected as an ecological reserve by CDFW.

Steiffer Road

Steiffer Road is an approximately 1.5-mile east-west road that extends from Skyway Road to its end at the Project site. Steiffer Road loops through the Project site and back toward Skyway Road. Several residential-use roads extend north and south from Steiffer 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, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐

Less than significant impact.

Short-term construction trips would include the transfer of construction equipment, construction worker trips, hauling trips for construction materials, and hauling excess fill offsite; however, impacts in this regard would be temporary in nature and would cease upon Project completion. Long-term operation of the Project would not generate an increase in vehicle trips that would adversely affect the circulation system; no impacts would occur. No Project components would require removal of vehicular lanes such that capacity would be reduced, or that would affect transit service. Therefore, 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 or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐

Less than significant impact.

Butte County has not yet adopted specific VMT metrics or thresholds of significance for transportation studies in accordance with CEQA Guidelines § 15064.3, subdivision (b). However, OPR has identified projects generating less than 110 daily trips as appropriate for screening from VMT analysis. The Project would employ the same number of CAL FIRE and CCC staff after Project completion. The Project would generate less than 110 daily net new trips and would therefore be screened from VMT analysis according to the OPR recommendations. Impacts are **less than significant**.

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)?	☐	☐	☒	☐

Less than significant impact.

The onsite circulation pattern is adequate for the proposed use and the site plan provides separate pathways for pedestrian circulation. The Project would not introduce transportation hazards and related impacts are **less than significant**. No mitigation is required.

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.

During CAL FIRE's required review of the Project's applications, the Project's design would be reviewed to ensure that adequate access to and from the site is provided for emergency vehicles. The Project will provide updated fire protection and emergency response facilities including internal circulation improvements. Impacts are expected to be **less than significant**, and no further analysis is required.

4.17.3 Mitigation Measures

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

4.18 Tribal Cultural Resources

This section describes the affected environment and regulatory setting for Tribal Cultural Resources (TCR) in the Project area. TCRs are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. The following analysis of the potential environmental impacts related to TCRs is derived primarily from the following sources:

- California NAHC Sacred Lands File Search, February 23, 2021;
- *Cultural Resources Inventory and Architectural History Peer Review for the Butte Fire Center Replacement Project* (ECORP 2021c);
- Ethnographic overviews of the Maidu and Konkow (Dixon 1905; Heizer 1978; Kroeber 1925; Powers 1877; Riddell 1978; Riddell and Pritchard 1971; Shipley 1978); and
- In the absence of tribes that requested formal consultation, the record of Informal tribal communication between RESD and culturally affiliated Native American tribes.

4.18.1 Environmental Setting

4.18.1.1 Ethnographic, Religious, and Cultural Context

The Project area is within the ethnographic tribal territory of the Maidu, located in the lower foothills of the western slopes of the Sierra Nevada range and in the periphery of the Northern Sacramento Valley. Early ethnographers grouped the Maidu into three major related divisions (Dixon 1905; Kroeber 1925; Powers 1877): the Northeastern (Mountain Maidu), Northwestern (Konkow), and Southern (Nisenan).

Because many believe the Mountain Maidu and Konkow to be so closely related, ethnographers tended to group them as one.

4.18.1.2 Mountain Maidu and Konkow

The Konkow occupied territory located immediately adjacent and to the southwest of the Mountain Maidu, along the Feather and Sacramento rivers, to their southern boundary at the Sutter Buttes. The ethnographic 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 Maidu and Konkow languages and associated dialects are members of the Maiduan language family of the California Penutian Linguistic Stock. Unlike the Maidu, whose dialects were unique to each of the four major regions of occupation, the Konkow spoke a large number of dialects, with each settlement area supporting more than one dialect (Shipley 1978). The Konkow called themselves *ko'yo-mkawi*, or *meadowland* (Riddell 1978).

Settlement patterns of the Maidu and Konkow were seasonal in nature. The Konkow inhabited a savanna-like habitat on the valley floor and in the lower elevations of the Sierra Nevada foothills. Resources exploited in this environment include wild rye, pine nuts, acorns, fish, and invertebrates (Kroeber 1925; Riddell 1978). Summer hunting trips into the mountains provided deer meat, skins, and other items for food, clothing, and shelter for the winter months.

The village community was the primary settlement type among the Maidu and consisted of three to five small villages, each composed of about 35 members. Among the Mountain Maidu, village communities were well-defined and based on geography. In contrast, the Konkow were dispersed throughout the valley floor along river canyons, and as a result, village communities were less concentrated or definable (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).

Contact between the Maidu and Western culture was initiated as early as 1808 by Spanish explorers and fur trappers. The effects of the introduction of new diseases notwithstanding, native cultures remained essentially unchanged until after the discovery of gold at Coloma in 1848 (Riddell 1978). An outbreak of

malaria in 1833, the 1848 Gold Rush, and subsequent massacre of Native Americans resulted in an upset of the ecological and social balance of local Native societies. As a direct result, aboriginal populations plummeted from 8,000 in 1846 to only 900 in 1910 (Riddell 1978).

In 1855, the U.S. Congress authorized treaties to set aside reservation lands for Native Americans, after which some Konkow were relocated to the Nome Lackee reservation in present-day Tehama County (Kowta 1988). Descendants of the Maidu and Konkow have currently revitalized their ancestral heritage and have dissociated into the Enterprise, Berry Creek, and Mooretown rancherias in Oroville; the Mechoopda Indian Tribe in Chico; the United Maidu Nation and Susanville Rancheria in Susanville; and the Greenville Rancheria in Plumas County.

4.18.2 Regulatory Setting

4.18.2.1 Assembly Bill 52

Assembly Bill (AB) 52 is a part of CEQA that requires: 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 I of Section 5024.1. In applying the criteria set forth in subdivisil(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 also 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.

In accordance with Section 21082.3(c)(1) of the PRC:

> "… information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with subdivlon (r) of Section 6254 of, and Section 6254.10 of, the Government Code, and subdivision (d) of Section 15120 of Title 14 of the CCR, without the prior consent of the tribe that provided the information."

Therefore, the details of tribal consultation summarized herein are provided in a confidential administrative record and not available for public disclosure without written permission from the tribes.

Summary of Tribal Outreach under AB 52

At the time CAL FIRE was ready to initiate CEQA review, it had received written requests to receive Project notices from one California Native American Tribe in the region. The Mechoopda Indian Tribe of Chico Rancheria identified itself as being traditionally and culturally affiliated with the lands subject to CAL FIRE jurisdiction for this Project.

On January 27, 2021, DGS and CAL FIRE determined that it had a complete Project Description and was ready to begin review under CEQA. On the same day, CAL FIRE sent an initial notification letter to the tribe with Project information and an invitation to consult on the Project. CAL FIRE requested a response to the offer to consult within 30 days of the receipt of the letter. In accordance with Section 21080.3.1(d) of the PRC, a response to the offer to consult was requested by February 26, 2021. No response from the tribe was received; therefore, no tribal consultation was initiated.

Summary of Non-AB 52 Tribal Outreach

On January 27, 2021, CAL FIRE sent notification letters to tribes on a standing outreach list maintained by CAL FIRE. The letters were sent to the following tribes:

- Berry Creek Rancheria of Maidu Indians
- Butte Tribal Council
- Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Greenville Rancheria of Maidu Indians
- Maidu Cultural and Development Group
- Mooretown Rancheria of Maidu Indians

Each letter was sent with Project information and an invitation to comment on the Project. CAL FIRE requested responses to the offer to consult within 30 days of the receipt of the letter. One response was received from Mooretown Rancheria of Maidu Indians. The resulting coordination is outlined below.

Mooretown Rancheria of Maidu Indians

On February 23, 2021, Mooretown Rancheria of Maidu Indians sent formal response to CAL FIRE via email. The tribe acknowledged receipt of CAL FIRE's offer to comment on the Project and stated that after reviewing the information provided, the Mooretown Rancheria is not aware of any known cultural resources in the Project area. They requested to be notified if any new information or human remains are found as the Project progresses. Further coordination or consultation was not requested or initiated with the Mooretown Rancheria of Maidu Indians for this Project.

4.18.2.2 Tribal Cultural Resources

In the absence of tribal consultation, information about potential impacts to TCRs was drawn from the following:

1. the results of a search of the Sacred Lands File of the NAHC;
2. existing ethnographic information about pre-contact lifeways and settlement patterns;
3. information on archaeological site records obtained from surveys of the Project area and the California Historical Recourse Information System; and
4. non-AB 52 tribal coordination between CAL FIRE and Mooretown Rancheria.

Sacred Lands File Search

A search of the NAHC Sacred Lands File was requested for the Project area on January 28, 2021. The NAHC responded on February 23, 2021, that the Sacred Lands File search was negative, which means that no sacred lands have been recorded within the Project area. The NAHC included a list of suggested tribal representatives to contact who may have more information. The Mooretown Rancheria of Maidu Indians and Mechoopda Indian Tribe of Chico Rancheria were on the list of contacts; both were offered an opportunity to comment on the Project, as summarized above.

Ethnographic Information

Ethnographic information was reviewed for the Project, including ethnographic maps. The *Handbook of North American Indians* (Riddell 1978) lists the nearest Native American village as *Ti'Kus-se*, located on the eastern bank of the West Branch Feather River, about 10 miles southeast of the Project area. No villages were mapped in the Project area vicinity.

Archaeological Site Records

The entire Project area was subjected to an archaeological survey and records search review for the current study; no Native American sites have been identified within its boundaries. No Native American archaeological sites were recorded as a result of these past studies.

Non-AB 52 Tribal Coordination

The only coordination tribe, Mooretown Rancheria, stated they are not aware of any known cultural resources in the Project area. However, they acknowledged the possibility of unanticipated discoveries of such resources during Project construction.

4.18.3 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

Less than significant with mitigation incorporated.

No tribes requested consultation for this Project, and no previously recorded Native American resources were identified as a result of non-AB 52 tribal outreach, ethnographic information, or the archaeological study and records search. However, the potential exists for the Project to unearth unanticipated TCRs during construction. Implementation of mitigation measure **TCR-1** would reduce Project impacts to any unanticipated TCRs in the Project area to less than significant.

There have been no human remains discovered on the property during past or current cultural resource investigations; however, the potential exists for project construction to unearth human remains. Implementation of mitigation measure **CUL-1** would assure that any discovery of human remains within the Project area would be subject to these procedural requirements. Implementation of this mitigation

measure would reduce impacts associated with the discovery/disturbance of human remains to be **less than significant.**

4.18.4 Mitigation Measures

TCR-1: Unanticipated Discoveries

- If subsurface deposits are encountered which represent a Native American or potentially Native American resource that does not include human remains, all work shall cease in the vicinity of the find and the contractor shall immediately contact CAL FIRE and DGS and coordinate to contact a member of a culturally affiliated tribe. If the tribal representative determines the find is a TCR, the tribe, CAL FIRE, and DGS shall consult on appropriate treatment measures. Preservation in place is the preferred treatment, if feasible. 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 Tribal Cultural Resource or a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to their satisfaction. This Mitigation Measure shall be implemented in conjunction with Mitigation Measure **CUL-1**.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

Del Oro Water Company currently provides service to the site. The water main located in Steiffer Road is sufficient to continue serving the site. New domestic water and fire water distribution systems will be installed in each building connecting to the existing water system. A fire pump will be installed to boost pressure for the fire suppression system. Other water system improvements will include storage tanks, pump/pressure system, fire hydrants, backflow prevention, and the fire pump. Del Oro will not own or service hydrants or fire mains onsite.

4.19.1.2 Stormwater

The Project site would mostly maintain existing grades. The site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. A new retention basin will be installed as part of the Project and will be located in the same area of the existing retention basin, north of the proposed multi-purpose and apparatus buildings. The new retention basin will be approximately 55,552 sf. The basin will be designed to store stormwater runoff from the site due to a 100-year storm event. Any excess water will be directed to a designed overflow where water will flow through cobble and sheet flow following existing drainage patterns. A previously abandoned septic system will be removed as needed for installation of the proposed retention basin.

4.19.1.3 Wastewater

Wastewater collection and treatment is provided by an existing septic system to the south of the facility. New wastewater collection systems will connect to the existing disposal system, and new septic lift stations are needed to connect to the existing leach field. A central 20,000-gallon septic tank serves the facility and pumps to a 6,177 linear-foot leach field located in the southeast corner of the site. The existing Captain's barracks has its own septic tank and leach field dispersal system, but this will be deactivated. The new Captain's barrack's will be connected to the main system via a pump vault.

4.19.1.4 Electricity

PG&E will continue to provide electricity for the Project site. A PV solar array will be constructed on canopies over two parking areas. The PV array will connect to the site's electrical system to offset the fire center's load, but will not tie into the PG&E grid.

4.19.1.5 Propane

Existing propane tanks serve the site and a new tank is proposed to serve the demand of the new buildings.

4.19.1.6 Solid Waste

Solid waste collection in Magalia is provided by Waste Management.

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

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, 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.

Project implementation would not result in a substantial increase in impervious surfaces onsite. A stormwater treatment system would be provided in compliance with local stormwater quality regulations. The onsite runoff would be collected and treated on the north side of the site, similar to current site conditions, with implementation of a new 55,552-sf retention basin.

Stormwater BMPs might include the following:

- Underground infiltration dependent on soil percolation test results
- Vegetated swales

Design options will be fully evaluated once the site plan and hydrology study are fully developed.

Del Oro Water Company is able to provide water service for the Proposed Project through an existing water main. Wastewater would be treated through an onsite septic system including leach fields. The Project would not result in the construction or relocation of new utility infrastructure having significant environmental effects. A **less than significant** impact would occur. No mitigation is required.

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?		☐	☒	☐

Less than significant impact.

Del Oro Water Company will continue to supply water to the site. Proposed Project water demand will be similar to the site's existing demand. A **less than significant** impact would occur. No mitigation is required.

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?	☐	☐	☒	☐

Less than significant impact.

Wastewater is collected and treated onsite. Improvements, including septic lift stations, will be made to the existing collection system. Proposed Project wastewater demand will be similar to the site's existing demand. A **less than significant** impact would occur. No mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐

Less than significant impact.

Demolition and construction activities associated with the Project would generate solid waste. However, the solid waste generated would not exceed the capacity of local infrastructure/landfills and would not impair the attainment of solid waste reduction goals. The Project site will largely operate similar to current conditions and produce solid waste quantities similar to those currently generated at the site. Related impacts are **less than significant**. No mitigation is required.

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 management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Less than significant impact.

The California Integrated Waste Management (CIWM) Act requires every county to adopt an integrated waste management plan that describes county objectives, policies, and programs relative to waste disposal, management, sources reduction, and recycling. Butte County Department of Public Works, Waste Management Division, reviews and approves all new construction projects required to submit a Construction and Demolition Solid Waste Management Plan that is consistent with the CIWM Act. The disposal of solid waste due to construction activities will comply with all federal, state, and local statues and regulations. Impacts to solid waste statues and regulations will be **less than significant**. No mitigation is required.

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 Project proposes to upgrade the existing BFC located near Paradise lake in Magalia, California, thereby allowing the CAL FIRE Butte Unit to better serve Butte County, Magalia, Briggs, Gridley, Paradise, and the Plumas and Lassen National Forests. The Project is also intended to improve CCC's training and operations facilities so that they may better serve their mission. The Project would allow the fire center to continue to provide high-quality fire protection and emergency-response service within the State Responsibility Area (SRA) and Local Responsibility Area (LRA). The Proposed Project is in a heavily forested and rural residential area.

Generally, California fire season extends from spring to late fall. Fire conditions arise from a combination of hot weather, an accumulation of vegetation, and low moisture content in the air. These conditions, especially when amplified by high winds or years of drought, increase the potential for wildfire to occur. CAL FIRE provides wildland fire protection services on private, non-federal lands for the purpose of life, property, and resource protection. USFS and the Bureau of Land Management (BLM) provide wildland fire

protection services on federal lands in Federal Responsibility Areas for watershed and resource protection. Some areas are also identified as LRAs.

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 impact.

The Project site is classified as Moderate FHSZ, but is immediately surrounded in all directions by a Very High FHSZ, according to the FHSZs in the SRA Map adopted by CAL FIRE in 2007. The Very High FHSZ is the western edge of the Plumas National Forest, which is managed by several state and federal entities, including the USFS, BLM, and CAL FIRE. The Proposed Project will allow the BFC to better serve these areas and the facility will remain operational during construction.

Construction of the Proposed Project will not impair or conflict with an adopted emergency response or evacuation plan for areas in High FHSZs. There would be a **less than significant** impact. It's worth noting the facility would house approximately 80 trained and equipped CCC Corpsmembers to respond to both natural and manmade disasters (including fire) which should aid emergency evacuation plans.

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.

See answer to a), above. In addition, the site is moderately contoured with approximately 30 feet of descent from west to east, and an additional 10-foot drop to the Captain's barracks, located in the northeast portion of the camp. Retaining walls will be constructed to provide level building pads at several locations throughout the camp. A **less than significant** impact would occur.

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.

See answers to a) and b), above. The Project site is an operating fire and emergency response facility; that use will remain during Project construction and operation. A **less than significant** impact would occur.

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.

See above discussion. The Project involves upgrading an existing fire and emergency response facility. The site is relatively level and the improvements would be primarily within the existing footprint of the facility. Additionally, the Project will not increase landslide or flooding risk. **No impact** would occur.

4.20.3 Mitigation Measures

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

4.21 Mandatory Findings of Significance

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

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

Less than significant with mitigation incorporated.

As described in Section 4.4 *Biological Resources* of this document, biological resources on the site could be affected by the Proposed Project. Mitigation Measures **BIO-1**, **PLANT-1**, **PLANT-2**, **BIRD-1**, **BIRD-2**, and **BAT-1** would be implemented to ensure all potential impacts to special-status species and their habitats are mitigated to less than significant levels.

As indicated in Section 4.5 *Cultural Resources* and Section 4.18 *Tribal Cultural Resources*, the Proposed Project is expected to avoid direct impacts to known cultural and tribal resources. Further, implementation of mitigation measures **CUL-1** and **TCR-1** will ensure potential impacts to unknown cultural and tribal resources are reduced to less than significant levels. Should any cultural or tribal cultural resources or human remains be encountered during construction, all construction activities would be halted, and a professional archeologist consulted. Similarly, implementation of mitigation measure **GEO-1** would ensure potential impacts to unknown paleontological resources are **mitigated to less than significant**.

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

Less than significant with mitigation incorporated.

As described above, impacts to biological, cultural, and paleontological resources would be reduced with implementation of listed mitigation. All other impacts were found to be less than significant (including air quality, energy, greenhouse gas emissions, noise, and traffic). Therefore, cumulative impacts would be **less than significant with mitigation incorporated**.

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.

As discussed in Section 4.9 *Hazards and Hazardous Materials*, potential impacts to human beings include existing ACCM and lead-based paints in several buildings throughout the Project site. Mitigation measure **HAZ-1** would ensure Project compliance with all recommendations outlined in the *Hazardous Materials Survey*. There is also the potential to unearth naturally occurring asbestos during ground disturbing activities. The Project would prevent potential NOA from becoming airborne by minimizing prolonged exposure of uncovered earth in multiple areas, thereby not allowing wind to entrain the soil. Additionally, mitigation measure **HAZ-2** would prevent airborne dust and reduce potential impacts to **less than significant**.

Implementation of the Project's Mitigation Monitoring and Reporting Program would ensure compliance with related measures and would minimize impacts to the greatest extent feasible.

THIS PAGE INTENTIONALLY LEFT BLANK

5.0 LIST OF PREPARERS

5.1 State of California Department of Forestry and Fire Protection (Lead Agency)

Doug Barber, PE

5.2 California Department of General Services, Real Estate Services Division

William Greenleaf, Project Director

Terry Ash, Senior Environmental Planner

5.3 ECORP Consulting, Inc.

CEQA Documentation/Air Quality/Biological Resources/Cultural Resources/Energy/Greenhouse Gas/Noise

Chris Stabenfeldt, AICP, Program Manager

Matteo Rodriquez, Associate Environmental Planner/Project Manager

Seth Myers, Air Quality/GHG/Noise Analyst

Collin Crawford-Martin, Air Quality/GHG/Noise Analyst

Rosey Worden, Assistant Environmental Planner

Keith Kwan, Senior Biologist

Thea Fuerstenberg, Senior Archaeologist

Jeff Swager, GIS Manager

Kyleigh Turnquist, GIS Specialist

Laura Hesse, Technical Editor

5.4 Nichols, Melburg & Rossetto Architects

Schematic Design, Project Summary & Narratives

Daryn Howland, Senior Associate Architect, NCARB, LEED AP

5.5 Entek Consulting Group, Inc.

Hazardous Materials Survey

Ryan Metzen, Project Manager, Cal/OSHA CAC #17-6120, CDPH I/S/M Certification LRC #07452

5.6 Mid-Pacific Engineering

Geotechnical Engineering Report Butte Fire Center – California Conservation Corps Camp

Woody Pollard, Engineering Geologist

Troy Kamisky, Principal Engineer

THIS PAGE INTENTIONALLY LEFT BLANK

6.0 BIBLIOGRAPHY

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual; Vascular Plants of California*, Second Edition. University of California Press, Berkeley, California.

Bierregaard, R. O., A. F. Poole, M. S. Martell, P. Pyle, and M. A. Patten. 2020. Osprey (*Pandion haliaetus*), version 1.0. In *Birds of the World* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.osprey.01.

Bildstein, K. L., K. D. Meyer, C. M. White, J. S. Marks, and G. M. Kirwan. 2020. Sharp-shinned Hawk (*Accipiter striatus*), version 1.0. In *Birds of the World* (S. M. Billerman, B. K. Keeney, P. G. Rodewald, and T. S. Schulenberg, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.shshaw.01.

Buehler, D. A. 2020. Bald Eagle (*Haliaeetus leucocephalus*), version 1.0. In *Birds of the World* (A. F. Poole and F. B. Gill, Editors). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.baleag.01.

Butte County. 2021. *Butte County Code of Ordinances*.

_____. 2016. *The Land Conservation (Williamson) Act*. https://www.buttecounty.net/dds/Planning/Williamson-Act-Information.

_____. 2012. *Butte County General Plan 2030*.

_____. 2010. Butte County General Plan Draft EIR.

Butte County Air Quality Management District (BCAQMD). 2014. *CEQA Air Quality Handbook*.

Butte County Association of Governments. *BCAG SB 743 Implementation*. 2021.

Butte County Department of Agriculture. 2020. *Butte County 2019 Crop & Livestock Report*.

Butte County Office of Emergency Management. 2011. *Emergency Operations Plan*. http://www.buttecounty.net/cob/Agendas/2011/Agenda_031511/3.10.pdf. Accessed February 2021.

California Air Pollution Control Officers Association (CAPCOA). 2017. *California Emissions Estimator Model (CalEEMod), version 2020.4.0*.

_____. 1997. *Gasoline Service Station Industrywide Risk Assessment Guidelines*.

California Air Resources Board (CARB). 2021. *EMFAC2021 Emissions Model*.

_____. 2019. *State and Federal Area Designation Maps*. http://www.arb.ca.gov/desig/adm/adm.htm.

_____. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*.

California Department of Fish and Wildlife (CDFW). 2021a. Rarefind 5. Online Version, commercial version dated January 1, 2021. California Natural Diversity Database. The Resources Agency, Sacramento.

_____. 2020. California Natural Community List. Version dated; September 9, 2020. Available online: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153398&inline.

California Department of Forestry and Fire Protection (CAL FIRE) Butte Unit. 2021. *Butte County Cooperative Fire Protection Annual Report 2019*.

_____. 2007. *Fire Hazard Severity Zone Maps*. https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/.

California Department of Transportation (Caltrans). 2020a. *State Scenic Highways*. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. Accessed January 2021.

_____. 2020b. *Transportation- and Construction-Induced Vibration Guidance Manual*.

_____. 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*.

California Department of Water Resources (DWR), 2000. *Draft Butte County Groundwater Inventory Analysis*. Northern District. Department of Planning and Local Assistance.

California Energy Commission (CEC). 2020. *California Energy Consumption Data Management System*. Website: Electricity and Natural Gas Consumption by County. http://www.ecdms.energy.ca.gov/.

California Native Plant Society (CNPS). 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.38). Available online: http://www.rareplants.cnps.org. Accessed January 2021.

California State Geoportal. 2021. Areas with potential for naturally occurring asbestos. https://gis.data.ca.gov/app/CDPHDATA::areas-with-potential-for-naturally-occurring-asbestos. Accessed February 2021.

Cicero, C., P. Pyle, and M. A. Patten. 2020. Oak Titmouse (*Baeolophus inornatus*), version 1.0. In *Birds of the World* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.oaktit.01.

Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*.

Crockett, Alexander G. 2011. *Addressing the Significance of Greenhouse Gas Emissions Under CEQA: California's Search for Regulatory Certainty in an Uncertain World*.

Department of Conservation. (DOC). 2017a. California Important Farmland Finder. https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed January 2021.

_____. 2017b. Farmland Mapping & Monitoring Program. Available online at: https://www.conservation.ca.gov/dlrp/fmmp. Accessed January 2021.

Dixon, R. B. 1905. The Northern Maidu. *Bulletin of the Museum of Natural History* 17(3):119-346. New York.

eBird. 2021. eBird: An online database of bird distribution and abundance [web application]. eBird, Cornell Lab of Ornithology, Ithaca, New York. Available: http://www.ebird.org. Accessed January 2021.

ECORP Consulting, Inc. 2021a. *CalEEMod Emissions Modeling*.

_____. 2021b. *Biological Resources Assessment, CAL FIRE/CCC Butte Fire Center Replacement Project, Butte County, California*. September.

_____. 2021c. *CONFIDENTIAL Cultural Resources Inventory and Architectural History Evaluation Peer Review: Butte Fire Center Replacement Project*. September

_____. 2021d. *Proposed Project Total Construction-Related and Operational Gasoline Usage* - August

_____. 2021e. *Project Baseline Noise Measurements*. August

Entek Consulting Group, Inc. 2020a. *Hazardous Materials Survey*.

_____. 2020b. *Addendum #1 to Hazardous Materials Report, Asbestos Bulk Sample Results*.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U. S. Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.

Federal Highway Administration (FHWA). 2011. Effective Noise Control During Nighttime Construction. Available online at: http://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm.

_____. 2006. *FHWA Roadway Noise Construction Model*.

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment*.

Guzy, M. J. and P. E. Lowther. 2020. Black-throated Gray Warbler (*Setophaga nigrescens*), version 1.0. In *Birds of the World* (A. F. Poole, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.btywar.01.

Heizer, R. F. 1978. *Handbook of North American Indians: California 8*. Key to Tribal Territories, pp. ix. Smithsonian, Washington.

Kowta, M. 1988. *The Archaeology and Prehistory of Plumas and Butte Counties, California: An Introduction and Interpretive Model*. Report on file, North Central Information Center, Department of Anthropology, California State University, Sacramento.

Kroeber, A. L. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Washington.

Mid Pacific Engineering, Inc. (MPE). 2021. *Geotechnical Engineering Report Butte Fire Center – California Conservation Corps Camp*.

Napton, L.K. and Elizabeth Greathouse, 2017. *Historical Building Evaluation of the CAL FIRE Butte Fire Center, Magalia, Butte County, California*. California State University, Stanislaus, Department of Anthropology, Turlock, California. Department of Forestry and Fire Protection, Sacramento.

National Oceanic and Atmospheric Administration. 2021. Data Tools: 1981-2010 Climate Normals. Available Online: https://www.ncdc.noaa.gov/cdo-web/datatools/normals. Accessed January 2021.

National Park Service (NPS). 1983. Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. 48 FR (Federal Register) 44716-68.

National Institute for Occupational Safety and Health (NIOSH). 1998. *Occupational Noise Exposure*.

Natural Resources Conservation Service (NRCS). 2021a. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/. Accessed January 2021.

_____. 2021b. Soil Data Access Hydric Soils List. https://www.nrcs.usda.gov/wps/portal/nrcs/mail/soils/use/hydric/. Accessed January 2021.

Powers, S. 1877. Tribes of California. Contributions to North American Ethnology 3. U.S. Geographical and Geological Survey of the Rocky Mountain Region. Washington.

Riddell, F.A. 1978. Maidu and Konkow. *Handbook of North American Indians Vol. 8: California*. Pp. 370-386. Smithsonian, Washington.

Riddell, F.A. and W.E. Pritchard. 1971. Archaeology of the Rainbow Point Site (4-Plu-S94), Bucks Lake, Plumas County, California. University of Oregon Anthropological Papers 1:59-102. Eugene.

Rosenfield, R. N., K. K. Madden, J. Bielefeldt, and O. E. Curtis. 2020. Cooper's Hawk (*Accipiter cooperii*), version 1.0. In *Birds of the World* (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.coohaw.01.

Rosenthal, J. S., White G. G., Sutton M. Q. 2007. The Central Valley: A View from the Catbird's Seat. In: *California Prehistory: Colonization, Culture, and Complexity*. T.L. Jones, Klar K.A., editors. p. 147-163. Published by Altamira Press, Lanham, Maryland.

Sawyer, J., Keeler-Wolf T., Evens J. M. 2009. *A Manual of California Vegetation, Second Edition*. Sacramento, California: California Native Plant Society.

Shipley, W. F. 1978. Native Languages of California. In *Handbook of North American Indians, Vol. 8: California*, edited by R.F. Heizer, pp. 80-90. Smithsonian Institution, Washington, D.C.

Small, A. 1994. *California Birds: Their Status and Distribution*. Ibis Publishing Company. Vista, California. 342 pp.

South Coast Air Quality Management District (SCAQMD). 2003. *2003 Air Quality Management Plan*.

_____. 1992. *1992 Federal Attainment Plan for Carbon Monoxide*.

State Water Resources Control Board (SWRCB). 2019. *State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. April 2. Rev. April 6, 2021. https://www.waterboards.ca.gov/press_room/press_releases/2021/procedures.pdf.

University of California Museum of Paleontology. University of California Museum of Paleontology CMP Specimen Search. https://ucmpdb.berkeley.edu/. Accessed September 2021.

U.S. Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountain, Valleys, and Coast Region*. ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer.

U.S. Census Bureau. 2018. *Quick Facts Magalia CDP, California*. https://www.census.gov/quickfacts/fact/table/magaliacdpcalifornia/PST045219. Accessed March 2021.

U.S. Environmental Protection Agency (USPEA). 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*.

U.S. Fish and Wildlife Service (USFWS). 2021a. Information, Planning, and Consultation System (IPaC) Resource Report List for the Study Area. Available online: https://ecos.fws.gov/ipac/location/V7ZCJP3FGRF4HEPLL6CDF6YRNU/resources#migratory-birds. .

_____. 2021b. Birds of Conservation Concern 2021. U.S. Fish and Wildlife Service. Migratory Birds, Falls Church, Virginia. Available online: http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php.

U.S. Forest Service. 2021. Plumas National Forest, About the Forest. https://www.fs.usda.gov/main/plumas/about-forest. Accessed January 2021.

Van Gosen, Bradley S. and Clinkenbeard, John P. 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California (California Geological Survey Map Sheet 59). USGS and CGS.

Western Bat Working Group (WBWG). 2021. Western Bat Species Accounts. http://wbwg.org/western-bat-species/. Accessed January 2021.

Widdowson, W.P. 2008. Olive-sided Flycatcher. Pages 260 - 265 in W. D. Shuford and T. Gardali, Eds. *California Bird Species of Special Concern: A Ranked Assessment of Species, Subspecies, and Distinct Populations of Birds of Immediate Conservation Concern in California*. Studies of Western Birds No. 1. 450 pp.

THIS PAGE INTENTIONALLY LEFT BLANK

7.0 LIST OF APPENDICES

Appendix A – *Schematic Design, Project Summary & Narratives* - November 2020
NM&R Architects

Appendix B – *CalEEMod Emissions Modeling* - August 2021
ECORP Consulting, Inc.

Appendix C – *Biological Resources Assessment, CAL FIRE/CCC Butte Fire Center Replacement Project, Butte County, California* - September 2021
ECORP Consulting, Inc.

Appendix D – *CONFIDENTIAL Cultural Resources Inventory and Architectural History Evaluation Peer Review: Butte Fire Center Replacement Project* - September 2021
ECORP Consulting, Inc.

Appendix E – *Proposed Project Total Construction-Related and Operational Gasoline Usage* - August 2021
ECORP Consulting, Inc.

Appendix F –*Geotechnical Engineering Report Butte Fire Center – California Conservation Corps Camp* - January 2021
Mid Pacific Engineering, Inc.

Appendix G – *Hazardous Materials Survey Final Report* - December 2020
Entek Consulting Group, Inc.

- Attachment A – Addendum #1 to Hazardous Materials Report, Asbestos Bulk Sample Results
- Attachment B – Asbestos Requirements
- Attachment C – Requirements for Disturbance of Lead in Construction
- Attachment D – Other Hazardous Materials

Appendix H – *Project Baseline Noise Measurements* - August 2021
ECORP Consulting, Inc.

***Access each appendix by clicking the paper clip icon on the left side of your screen.**
Each attachment will open in a new tab.
Close the tab to return to this file.

www.ecorpconsulting.com

REDLANDS, CA
(909) 307-0046

SAN DIEGO, CA
(858) 275-4040

ROCKLIN, CA
(916) 782-9100

CHICO, CA
(530) 805-2585

FLAGSTAFF, AZ
(858) 232-9602

SANTA ANA, CA
(714) 648-0630

SANTA FE, NM
(714) 222-5932