Initial Study and Mitigated Negative Declaration

City of Oroville Oroville RV Resort

Lead Agency:

City of Oroville 1735 Montgomery Street Oroville, California 95965



Prepared by:



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BACKGROUND

Lead Agency: City of Oroville

Project Location: 504 Nelson Avenue within the City of Oroville, west of Highway 70, north

of Nelson Avenue and east of 6th Street in northwestern Oroville.

Project Description

Summary:

The proposed Project would develop 21.64-acres of land containing four

(4) parcels and construct a Recreational Vehicle (RV) Resort with accompanying amenities within the City of Oroville in Butte County.

Mitigation Measures Incorporated into the Project to Avoid Significant Effects:

Biological Resources

BIO-1: Special-Status Plant Habitat Avoidance. Perform focused plant surveys of the Project site according to CDFW, CNPS, and USFWS protocols prior to construction (CDFG 2009; CNPS 2001; USFWS 1996). Surveys shall be conducted by a qualified biologist according to the blooming period for target species and timed according to the appropriate phenological stage for identifying target species. Known reference populations will be visited and/or local herbaria records should 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.

If special-status plants are identified within 25-feet of the Project Site, implement the following measures:

The Project will avoid occurrences of special-status plant species by establishing and clearly demarcating avoidance zones around the plant occurrences prior to construction. Avoidance zones should include the extent of the special-status plants plus a minimum 25-foot buffer, unless otherwise determined by a qualified biologist, and should be maintained until the completion of construction. Additional measures such as seed collection and/or transplantation may be developed in consultation with CDFW and the CEQA lead agency if special-status plant species are found within the Project Site and avoidance of the species is not possible.

Federally Listed Branchiopods. If the Project proposes impacts to any of the wetland features within the Study Area, then the following measures are recommended to minimize potential impacts to federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp:

Conduct USFWS protocol-level dry and wet season surveys to determine presence or absence of vernal pool fairy shrimp and vernal pool tadpole shrimp, or if surveys are not conducted, presence should be assumed for both species within suitable habitat. If no

federally listed shrimp are found during protocol-level surveys, results are accepted by the CEQA lead agency, and surveys are considered recent at the time of Project construction, no further measures pertaining to federally listed branchiopods are recommended. Repeat surveys may be required if prior surveys are not considered recent or not accepted by the CEQA lead agency at the time of construction.

If presence of federally listed branchiopod is determined or presumed, obtain take coverage from USFWS under Section 7 or Section 10 of the federal ESA and preserve federally listed branchiopod habitat (e.g., vernal pools) onsite and/or at an offsite mitigation property at a minimum ratio of 1:1 and as agreed upon through consultation with USFWS. Comply with all avoidance and/or minimization measures of the USFWS BO or HCP. Measures may include implementation of Best Management Practices and erosion control measures to prevent direct and indirect effects to avoided federally listed branchiopod habitat.

BIO-3: Crotch Bumble Bee. If the Crotch's bumble bee is no longer a Candidate or formally listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.

If the Crotch's bumble bee is legally protected under the California ESA as a Candidate or Listed species at the time ground-disturbing activities are scheduled to begin, preconstruction surveys shall be conducted in accordance with CDFW's Survey Considerations for California ESA Candidate Bumble Bee Species (CDFW 2023) the season immediately prior to Project implementation. A minimum of three Crotch's bumble bee preconstruction surveys shall be conducted at two- to four-week intervals during the colony active period (April through August) when Crotch's bumble bee are most likely to be detected. Non-lethal surveys shall be completed by a biologist who either holds a Memorandum of Understanding to capture and handle Crotch's bumble bee (if netting and chilling protocol is to be utilized), or by a CDFW-approved biologist who is experienced in identifying native bumble bee species (if surveys are restricted to visual surveys that will provide high-resolution photo documentation for species verification). The surveyor shall walk through all areas of suitable habitat focusing on areas with floral resources. Surveys shall be completed at a minimum of one person-hour of searching per 3 acres of suitable habitat during suitable weather conditions (sustained winds less than 8 miles per hour, mostly sunny to full sun, temperatures between 65- and 90-degrees Fahrenheit) at an appropriate time of day for detection (at least one hour after sunrise and at least two hours before sunset, though ideally between 9:00 a.m. and 1:00 p.m.)

If Crotch's bumble bees are detected, CDFW shall be notified by the designated biologist as further coordination may be required to avoid or mitigate certain impacts. At a minimum, two nesting surveys shall be conducted with focus on detecting active nesting colonies within one week and the final survey within 24 hours prior to ground-disturbing activities that are scheduled to occur during the flight season (February through October). If an active Crotch's bumble bee nest is detected, an appropriate no-disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be

established around the nest to reduce the risk of disturbance or accidental take and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified biologist deems the nesting colony is no longer active. If no nests are found but the species is present, a full-time qualified biological monitor shall be present during vegetation or ground-disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). Because bumble bees move nest sites each year, two preconstruction nesting surveys shall be required during each subsequent year of construction, regardless of the previous year's findings, whenever vegetation and ground-disturbing activities are scheduled to occur during the flight season if nesting and foraging habitat is still present or has re-established.

BIO-4: Western Spadefoot. A qualified biologist shall conduct at least one set (up to two sets spaced at least 10 days apart) of preconstruction daytime and nighttime surveys for all life stages of western spadefoot to be conducted when surface water is ponded in aquatic features if feasible between October through May (when suitable environmental conditions are met) prior to Project initiation. Surveys will be conducted during or following rain events and in nonfreezing temperatures. Daytime surveys of aquatic features will be conducted with the aid of binoculars and polarized sunglasses for all life stages of western spadefoot as well as adjacent upland habitat for burrowing adults and juveniles. Nighttime audio detection and eye-shine surveys will be conducted with the aid of binoculars and flashlight for calling males in and near aquatic features.

A preconstruction survey report shall be prepared and submitted to the USFWS and CDFW, as appropriate, that includes the methods, results, and recommendations based on the survey. If the preconstruction survey(s) are conducted according to the above methods and no detections of western spadefoot occur within the Study Area, then no further measures need to be taken. If the preconstruction survey(s) are conducted according to the above methods and there are detections of western spadefoot within the Study Area, then the qualified biologist will relocate the individuals to suitable breeding habitat (aquatic features that pond water for 30+ days) outside of the Study Area and the following measures will be implemented.

- No Project activities shall occur from 30 minutes before local sunset time to 30 minutes after local sunrise time, and 48 hours after a significant rain event with a National Weather Service forecast of greater than or equal to 0.5 inch of rainfall within a 24-hour period.
- No equipment or vehicle refueling, maintenance, or staging shall occur within 100 feet of an aquatic feature that represents western spadefoot breeding habitat, as determined by a qualified biologist. The Project will coordinate the location of the equipment and vehicle staging area with the qualified biologist.

- Wildlife exclusion fencing will be installed around aquatic features that represent western spadefoot breeding habitat and shall be checked daily by a qualified biologist to relocate encountered individuals and ensure the fencing is intact and functioning properly. Wildlife exclusion fencing installed around aquatic features with positive detections of western spadefoot will be installed 40 meters from the extent of the aquatic feature. Project personnel will allow any encountered individuals to leave the site on their own volition or will be relocated by a qualified biologist to suitable breeding habitat.
- Prior to installation of wildlife exclusion fencing, a qualified biologist will conduct a clearance survey of the aquatic features and associated upland habitat. Wildlife exclusion fencing shall be installed under supervision and direction of a qualified biologist to avoid small mammal burrow refugia to the greatest extent possible.
- Any erosion or sediment control devices (such as straw wattles or erosion blankets) implemented within 500 feet of aquatic features that represent western spadefoot breeding habitat shall not contain materials that could cause entanglement of western spadefoot such as monofilament or any other nonbiodegradable material.
- BIO-5: Blaineville's Horned Lizard. Conduct a preconstruction survey for Blainville's horned lizard within the Study Area 48 hours prior to construction activities. Any Blainville's horned lizard individuals discovered in the Project work area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.
- **BIO-6:** Swainson's Hawk. If Project activities are scheduled during the Swainson's hawk nesting season (March 1 to August 31), then prior to beginning work on the Project a qualified biologist shall survey for Swainson's hawk nesting activity. The survey area shall include a 0.5-mile distance surrounding the Project site. The qualified biologist shall conduct surveys according to the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000) or, if proposing an alternate survey methodology, shall submit the proposed survey timing and methods to CDFW for review and written approval prior to initiation of surveys. Survey results shall be submitted to CDFW for review. If Swainson's hawk nesting activity is observed during the survey, then the survey results shall be submitted to CDFW for review and acceptance prior to starting Project activities. If the qualified biologist identifies nesting Swainson's hawks, then the biologist shall recommend a no-disturbance buffer, and the contractor shall implement the buffer under the supervision of a qualified biologist. Project activities shall be prohibited within the no-disturbance buffer between March 1 to August 31, unless otherwise approved in writing by CDFW, which may include consultation pursuant to California ESA and an Incidental Take Permit, or a qualified biologist determining that the

nest is no longer active. If there is a lapse in Project-related work of 14 days or longer, then an additional survey shall be conducted prior to resuming Project activities.

- **BIO-7: Burrowing Owl.** A preconstruction survey for nesting burrowing owl will be conducted by a qualified biologist within 14 days prior to commencement of Project activities within the Study Area and a 250-foot buffer. Surveys shall be conducted at appropriate times and in appropriate weather conditions to maximize detection. If active burrowing owl burrows are found, an avoidance buffer will be immediately established, and an avoidance plan will be prepared in consultation with CDFW prior to the commencement of any ground-disturbing activities.
- BIO-8: Tricolored Blackbird. Prior to initiation of construction activities in all Project work areas and within 1,300 feet of Project work areas, a qualified biologist shall conduct preconstruction surveys to evaluate the presence of tricolored blackbird nesting colonies. In instances where an adjacent parcel is not accessible to survey because the qualified biologist was not granted permission to enter, the qualified biologist will scan all potential nest colony sites from the adjacent property, roadsides, or other safe, publicly accessible viewpoints, without trespassing, using binoculars and/or a spotting scope to look for tricolored blackbird nesting activity.

Surveys should be conducted at least twice with at least one month between surveys during the nesting season one year prior to initial ground disturbing activities if feasible, and the year of ground-disturbing activities (required). If ground-disturbing activities will occur in the Project work area during the nesting season, three surveys shall be conducted within 15 days prior to ground-disturbing activities, with one of the surveys occurring within five days prior to the start of ground-disturbing activities. The survey methods will be based on Kelsey (2008) or a similar protocol approved by CDFW based on site-specific conditions.

BIO-9: Pallid Bat, Townsend's Big Eared Bat, and Day Roosting Bats. If trees are scheduled to be removed or trimmed, then a qualified bat biologist will conduct a bat habitat assessment for suitable bat roosting habitat prior to any construction activities. The habitat assessment should be conducted one year prior to the initiation of construction activities, if feasible, and no less than 30 days prior to the initiation of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat and/or signs of bat use are identified during the assessment, the roosting habitat should be avoided to the extent possible.

If avoidance of the identified bat roosting habitat is not feasible, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting bats. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees. The Project-specific Bat Management Plan shall include the requirement for an emergence and/or preconstruction survey for roosting bats, roost removal timing and methodology; and will include as necessary and appropriate the inclusion of acoustic monitoring, no-disturbance buffers,

methods and materials for passive exclusion of bats, species-specific habitat replacement mitigation, and/or post-construction mitigation monitoring.

Emergence surveys shall not be conducted during the bat inactive/hibernation period (typically October 15 through March 1, or when nighttime low temperatures are 45 degrees Fahrenheit or lower and rain is not over 0.5 inch in 24 hours), as bats are not detectable using emergence survey methods during their inactive period. If a maternity roost is located, that roost will remain undisturbed until after the maternity season or until a qualified biologist has determined the roost is no longer active.

If tree removal/trimming occurs outside of the bat maternity season and outside of bat hibernation season, tree removal during the weather parameters described shall be conducted after bat exclusion has been installed and left in place for no less than three days prior to removal/trimming, or using the two-step tree removal methods described below:

- As much as feasible, vegetation and trees within the area that are not suitable for roosting bats will be removed first to provide a disturbance that may reduce the likelihood of bats using the habitat.
- Two-step tree removal will occur over two consecutive days under the supervision of a qualified bat biologist. On Day 1, small branches and small limbs containing no cavity, crevice, or exfoliating bark habitat on habitat trees (or outer fronds in the case of palm trees), as identified by a qualified bat biologist are removed first, using chainsaws only (i.e., no dozers, backhoes). The following day (Day 2), the remainder of the tree is to be felled/removed. The intention of this method is to disturb the tree with noise and vibration and branch removal on Day 1. This should cause any potentially present day-roosting bats to abandon the roost tree after they emerge for nighttime foraging. Removing the tree quickly the next consecutive day should avoid reoccupation of the tree by bats. If bats are observed during the two-step removal process, the biologist will be notified, the tree will be left until the next day, and the biologist will inspect the tree to ensure the tree does not contain bats prior to disturbance. If bats remain the following day, CDFW will be notified and measures will be submitted, such as methods for passive bat exclusion, for written acceptance prior to implementation and tree disturbance.

If bat roost mitigation is required, roost mitigation will be installed as far in advance of the bat maternity season as possible, but no less than 30 days prior to roost removal.

BIO-10: Western Red Bat. If shrubs or trees are proposed to be removed or trimmed and determined by a qualified bat biologist to be suitable day-roosting habitat for western red bat, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting western red bats. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees and shrubs. The Project-specific Bat Management Plan shall include the requirement for preconstruction acoustic surveys for western red bats, a requirement for a

preconstruction survey report including methods, results, and recommendations based on the acoustic survey submitted to CDFW, roost removal timing outside of the maternity and hibernation seasons and methodology; and will include as necessary and appropriate the inclusion of no-disturbance buffers, methods and materials for bat deterrents, and/or species-specific habitat replacement mitigation.

BIO-11: Riparian Habitats and Sensitive Natural Communities. A SAA, pursuant to Section 1602 of the California Fish and Game Code, must be obtained for any activity that will impact the intermittent creek and associated riparian habitat. Minimization and mitigation measures would be developed during consultation with CDFW as part of the SAA process to ensure protections for affected fish and wildlife resources are implemented.

Cultural Resources

- CUL-1: Implement Measures to Protect Unanticipated Cultural, Archaeological, and/or Tribal Cultural Resources Discoveries. The following mitigation measure is intended to address the evaluation and treatment of inadvertent/unanticipated discoveries of potential tribal cultural resources (TCRs), archaeological, or cultural resources during a project's ground disturbing activities:
 - If any suspected archaeological or cultural resources are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A professional archaeologist who meets the Secretary of Interior's Standards for Archaeology will make recommendations for further evaluation and treatment, as necessary.
 - If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (PRC §21074). The Tribal Representative will make recommendations for further evaluation and treatment, as necessary.
 - When avoidance is infeasible, preservation in place is the preferred option for mitigation of TCRs, or archaeological or cultural resources under CEQA protocols, and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of TCRs will not take place unless approved in writing by the California Native American Tribe(s) that is traditionally and culturally affiliated with the project area.

- The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a TCR may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.
- Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of the CEQA, have been satisfied.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Butte County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Paleontological Resources

PALEO-1: Discovery of Unknown 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 the City 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. If the City resumes work in a location where paleontological remains have been discovered and cleared, the City will have a paleontologist onsite to confirm that no additional paleontological resources are in the area.

Noise

NOI-1: The Project improvement and building plans will include the following requirements for construction activities:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.
- As applicable, all equipment shall be shut off when not in use.
- Equipment staging shall be located in areas that create the greatest distance between construction-related noise/vibration sources and Nelson Avenue Middle School and Hearthstone School.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from Nelson Avenue Middle School and Hearthstone School.
- When used within 200 feet of any school boundary, jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be directed away from Nelson Avenue Middle School and Hearthstone School with the use of one-inch plywood or sound blankets. All such temporary sound barriers shall be positioned to reach up from the ground and block the line of sight between all portable stationary noise equipment and the schools. The shielding shall be devoid of holes and cracks.
- Project construction shall follow all provisions set forth in Chapter 9.20 of the City of Oroville Municipal Code.
- Per Section 9.20.060 of the City Municipal Code, construction is prohibited between the hours of 9:00 p.m. and 7:00 a.m. on weekdays and between 6:00 p.m. and 10:00 a.m. on Saturdays, Sundays and holidays.

Transportation

TRANS-1: Pedestrian and Bicycle Improvements. The Project shall construct off-site pedestrian sidewalk improvements and a bicycle lane along the Project frontage along Nelson Avenue to City of Oroville standards.

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Appendix E - Cultural Resources Inventory Report (Confidential), ECORP, 2024

Appendix F - Energy Consumption Assessment for the Oroville RV Resort Project, ECORP, 2024

Appendix G - Noise Assessment for the Oroville RV Resort Project, ECORP, 2024

Appendix H - CEQA Transportation Evaluation - Oroville RV Resort, Headway Transportation, 2024

LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
°F	Degrees Fahrenheit
AB	Assembly Bill
ANSI	American National Standards Institute
BCC	Bird of Conservation Concern
BCAQMD	Butte County Air Quality Management District
BCFD	Butte County Fire Department
BMPs	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH ₄	Methane
CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	Decibel

Term Definition

dBA A-Weighted Decibel

DHS Department of Health Services
DPM Diesel Particulate Matter

DTSC Department of Toxic Substances Control

DWR Department of Water Resources
EIR Environmental Impact Report

EO Executive Order

EOP Emergency Operation Plan ESA Endangered Species Acts FHWA Federal Highway Administration

fps Feet per second GHG Greenhouse Gas

GIS Geographical Information Systems

gpm Gallons Per Minute HP Horsepower IS Initial Study

MDD Maximum Daily Demands
MLD Most Likely Descendent

MND Mitigated Negative Declaration

MRZ Mineral Resource Zone

MSL Mean Sea Level

NAAQS
National Ambient Air Quality Standards
NAHC
Native American Heritage Commission
NHPA
National Historic Preservation Act
NSVAB
Northern Sacramento Valley Air Basin
NIOSH
Occupational Safety and Health

NOAA National Oceanic and Atmospheric Administration

NOI Notice of Intent

NPDES National Pollutant Discharge Elimination System

 N_2O Nitrous Oxide NO_x Oxides of Nitrogen

NRCS Natural Resources Conservation Service
NRHP National Register of Historic Places

OFD Oroville Fire Department

PG&E Pacific Gas and Electricity Company

PM Particulate Matter

PM_{2.5} Particulate Matter with a Diameter of 2.5 Microns or Less PM₁₀ Particulate Matter with a Diameter of 10 Microns or Less

PRC Public Resources Code

RCEM Roadway Construction Emissions Model
REHS Registered Environmental Health Specialist

ROG Reactive Organic Gases
PPV Peak Particle Velocity
PRV Pressure Reducing Valves

ROW Right-of-way

RWQCB Regional Water Quality Control Board

SB Senate Bill

Term Defin	ition
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SIP State Implementation Plan

SMARA Surface Mining and Reclamation Act of 1975

SR State Route

SSC Species of Special Concern

SWPPP Stormwater Pollution Prevention Plan SWRCB State Water Resources Control Board

TAC Toxic Air Contaminant
TDH Total Dynamic Head

TWSD Thermalito Water and Sewer District

USACE U.S. Army Corps of Engineers

UCMP University of California Museum of Paleontology

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

1.0 BACKGROUND

1.1 Summary

Project Title: Oroville RV Resort Project

Lead Agency Name and Address: City of Oroville

1735 Montgomery Street Oroville, California 95965

Contact Person and Phone Number: City of Oroville

Wes Ervin | City Planner

(530) 538-2401

Project Location: 504 Nelson Avenue within the City of Oroville, west of

Highway 70, north of Nelson Avenue and east of 6th Street in

northwestern Oroville.

General Plan Designation: RBS – Retail and Business Services

Zoning: C-2 – Intensive Commercial

1.2 Introduction

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

The Project proposes construction of a 127-space Recreational Vehicle (RV) resort with accompanying amenities on approximately 21.64-acres of land containing four (4) parcels identified as accessor's parcel numbers: 031-020-025, 031-020-060, 031-020-049, and 031-020-050.

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

1.3 Surrounding Land Uses/Environmental Setting

The proposed Project is in the City of Oroville (City) at 504 Nelson Avenue, Oroville, California 95965. The Project Site (Site) involves Butte County Assessor's Parcel Numbers: 031-020-025, 031-020-060, 031-020-049, and 031-020-050 and encompasses approximately 21.64-acres of land. The Site is situated north of Nelson Avenue and Chinchen Electric Supply, east of 6th Street and Hearthstone School, west of Highway 70, and south of the Nelson Ballpark Complex and Highway 70. The proposed Project Area is in the northwestern part of the City of Oroville, within Butte County. Project Area elevations range from 265 feet along the eastern boundary to 240 feet Above Mean Sea Level (AMSL) in the southwestern corner of the lot.

The Project site is currently vacant with ruderal grasses and some trees scattered throughout the site. A seasonal wetland exists in the southwestern portion of the site, just south of the southeastern corner of the Hearthstone School and Project Site boundary. Additionally, there is a drainage easement along the southeastern boundary of the Project Site abutting the Chinchen Electric supply facility that contains an intermittent creek. Lastly, a vernal pool exists in the southeastern portion of the site approximately 180 feet northwest of the location where the intermittent creek enters the site from Highway 70.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Project site is situated north of Nelson Avenue and Chinchen Electric Supply, east of 6th Street and Hearthstone School, west of Highway 70, and south of the Nelson Ballpark Complex and Highway 70 and consists of four parcels of land totaling 21.64-acres (Figure 2.0-1: Project Vicinity and Location and Figure 2.0-2: Project Aerial, and Figure 2.0-3 Repesentative Photographs). The site is currently undeveloped and located on Butte County's accessor's parcel numbers: 031-020-025, 031-020-060, 031-020-049, and 031-020-050. The Project Site is situated in Section 07, Township 19 North, Range 4 East, Mount Diablo Principal Meridian, and located at 39.525576° latitude and -121.576625° longitude.

2.2 Project Characteristics

The proposed Project would develop 21.64-acres of land consisting of all or a portion of four (4) parcels and construct a Recreational Vehicle (RV) Resort with accompanying amenities. The RV Resort would include 127 concrete sites for RV parking, nine (9) rental Airstream trailers, a 3,948-square-foot single-story banquet hall and clubhouse, a 1,300-square-foot outdoor covered breezeway with rooftop deck, 1,900-square-foot Gym including restrooms with lockers and showers, an outdoor pool and spa area with twelve (12) 100-square-foot outdoor cabanas, a two-story building containing a 3,275-square-foot welcome center with a 1,190-square-foot manager's apartment on the second floor, a 2,580-square-foot washhouse, a 900-square-foot shop, a 395-square-foot pumphouse, outdoor adventure play structures, a propane fill station, a golf putting green, two (2) pickleball courts, (2) bocce ball courts, a concrete elevated platform, dog park, firepits and picnic seating areas located through site and garden area. The park will have ADA compliant concrete pedestrian pathways throughout the park, no-mow turf mounding and turf areas. A representation of the proposed site plan can be found on Figure 2.0-4: Oroville RV Resort Site Plan and Appendix A, Design Plan Set.

The hours of operation of the proposed Project would be 7:00 a.m. to 8:00 p.m., seven days a week. Guest quiet time would be at 10:00 p.m. Guest check-in would be from 2:00 p.m. to 8:00 p.m., and guest check out would be by 11:00 a.m. When a customer checks in, an employee would guide them to their RV site and assist them with backing in and hooking up the utilities. On-site maintenance would be available throughout the day as required. Eight (8) to twelve (12) full-time employees are anticipated to be on-site, depending on the season.

Each RV standard site will have a 15-foot-wide concrete pad and a 15-foot-wide landscape strip. The luxury sites will have a 15-foot-wide concrete pad with an 18-foot-wide landscape area, to allow for wide RVs or pop-outs. The longer-term guests will stay in the 50-60-foot-long, back-in-only sites, along the Western Perimeter. The pull-through sites are primarily 80 feet long, allowing for multiple vehicles in addition to the RV. A flexible gravel area is planned to be located on the east side of the property, available to host larger groups, with the option to arrange the RVs in multiple configurations. Each site's landscape area will include turf, shade trees, a picnic table on a concrete pad, vegetative screening to the road and neighboring RV guests, and access to full utilities including electricity, sewer, water, and internet.

Signage for the proposed Project would be visible from Highway 70. Directional signages would be placed throughout the site.

Land Use and Planning

The proposed Project Site is designated as Retail and Business Services (RBS) in the City of Oroville General Plan. The zoning designation is Intensive Commercial (C-2). A Use Permit would be required for operation of an RV Park, per Section 17.32.010, Allowed Uses in Commercial Districts, of the City of Oroville Zoning Code. Additionally, the proposed Project involves a tentative parcel map as there are currently four different parcels of land.

There is an existing 20-foot drainage easement along the southeastern boundary of the Project Site, between the parcel that includes the Chinchen Electric Supply and Project Site.

Site Construction Features

Prior to any construction of the proposed Project, the site will be graded. The Project is also proposing to plant approximately 500 trees and 125 shrubs as part of the landscaping plan. The trees and shrubs vary in species and size. A fence is proposed along the east side of the Project Site, spanning the entire length of the parcel.

Additionally, as part of the site construction, the proposed Project will be installed with 12-inch, 15-inch, and 18-inch storm drains. This will involve drop inlets, storm drainages, sanitary sewer lines, water mains, service laterals, gate valves, and blow-off valves and will be installed throughout the site to serve the RV parking pads and amenities. Water and wastewater services would be provided by Thermalito Water and Sewer District.

Site lighting will be provided for all RV sites, parking lots and buildings. Site lighting will include halo solar wedge wall mounted lighting, solar LED bollard lighting, LED solar street lighting, LED outdoor posts lighting, and string lighting on the dining and club areas.

Dumpsters will be located at the washhouse and club house for solid waste disposal. Recology Butte Colusa Counties (Formerly NorCal Waste Systems) will collect solid waste from the Project Site multiple times a week.

Site Access

The proposed Project will be served by public streets and will have three different access points into the site. The first location is from Nelson Avenue, south of the Project Site. The second access point is on the west side of the Project Site and can be accessed from 6th Street. The third access point is also on 6th street, on the north side of the Project Site. The entrance on Nelson Avenue and the west 6th Street entrance will be the primary access points, as they are closest to the welcome center. Site entrances will be improved during construction to meet the City of Oroville's standard curb, gutter and sidewalk requirements. There will be 60 standard parking spaces and three (3) ADA-approved spaces.

Project Construction and Timing

Construction of the proposed RV Resort Project would begin following project approval. The proposed Project would be constructed in a single phase and aims to be open in 2025. Construction equipment will likely include excavators, backhoes, graders, loaders, skid steers, and dump trucks. Generally, construction will occur between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays. Post-construction activities will include site clean-up. Construction will require temporary staging and storage of materials and equipment. Staging areas will be located onsite.

Although construction is not expected to generate hazardous waste, field equipment used during construction has the potential to contain various hazardous materials such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products.

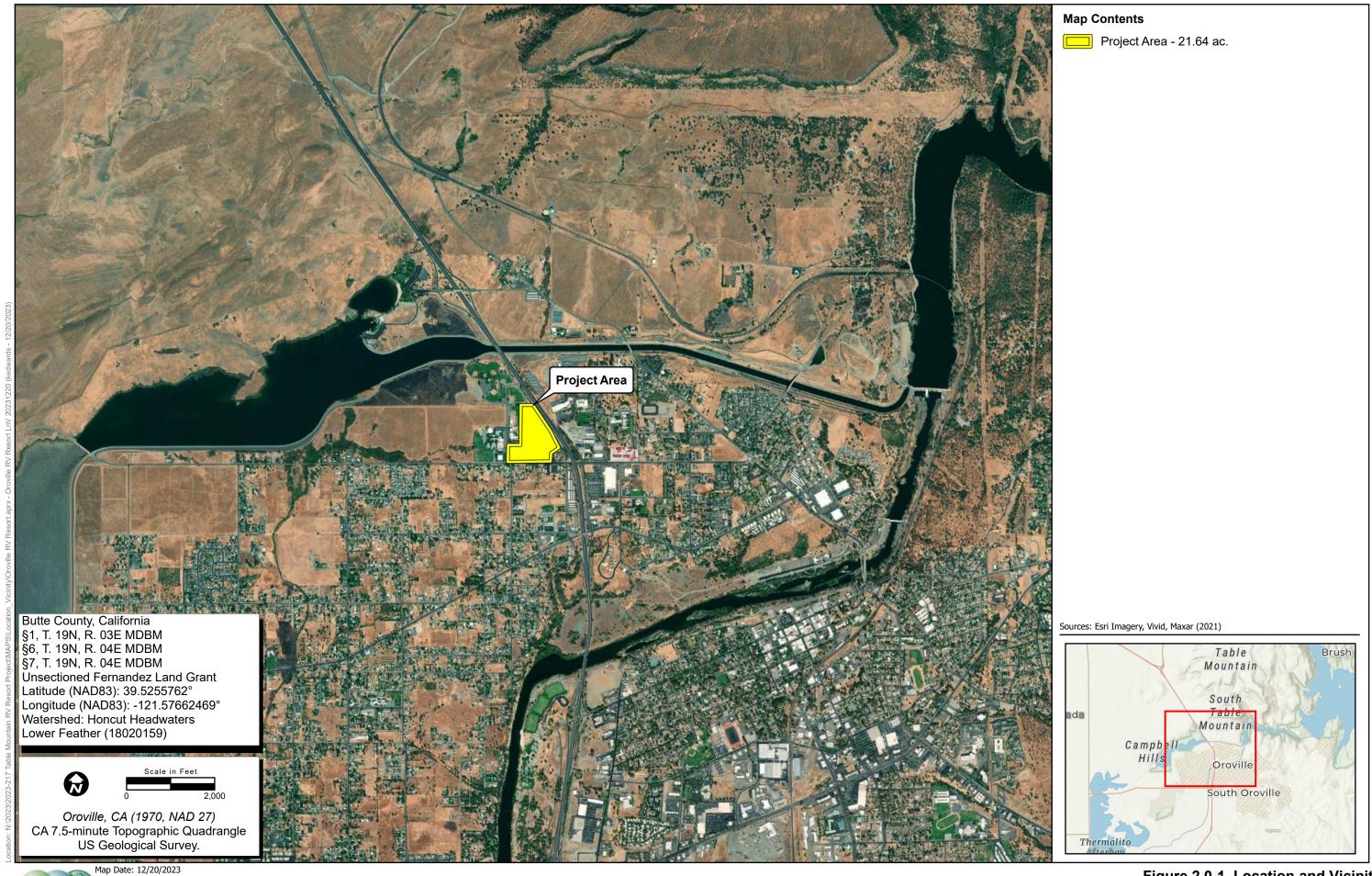
Regulatory Requirement, Permits, and Approvals

- City of Oroville Building Permit, Grading Permit, Use Permit, Tentative Parcel Map and related improvement plans, Tree Removal
- California Regional Water Quality Control Board (RWQCB): The applicant must obtain an NPDES
 Construction Activities Stormwater General Permit. The permit requires that the project applicant prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to any construction activities.
- U.S. Army Corp of Engineers (USACE): A wetland delineation was performed for the site and a variety of wetlands were identified; however, the proposed Project will avoid all wetlands.
- U.S. Fish and Wildlife Service (USFWS): Consultation for endangered species and possible take permits, if needed.
- Butte County Air Quality Management District (BCAQMD): The project applicant must incorporate
 all feasible Standard Construction Mitigation Measures into the project in addition to applicable
 Supplemental Mitigation Measures that BCAQMD may require.
- Thermalito Water and Sewer District (TWSD): The Thermalito Water and Sewer District serves the project area. The district will have authority to approve services to the project and approve and accept related infrastructure improvements adjacent to and within the project site.
- Pacific Gas and Electric Will provide electric and natural gas services to the project.

2.3 Consultation With California Native American Tribe(s)

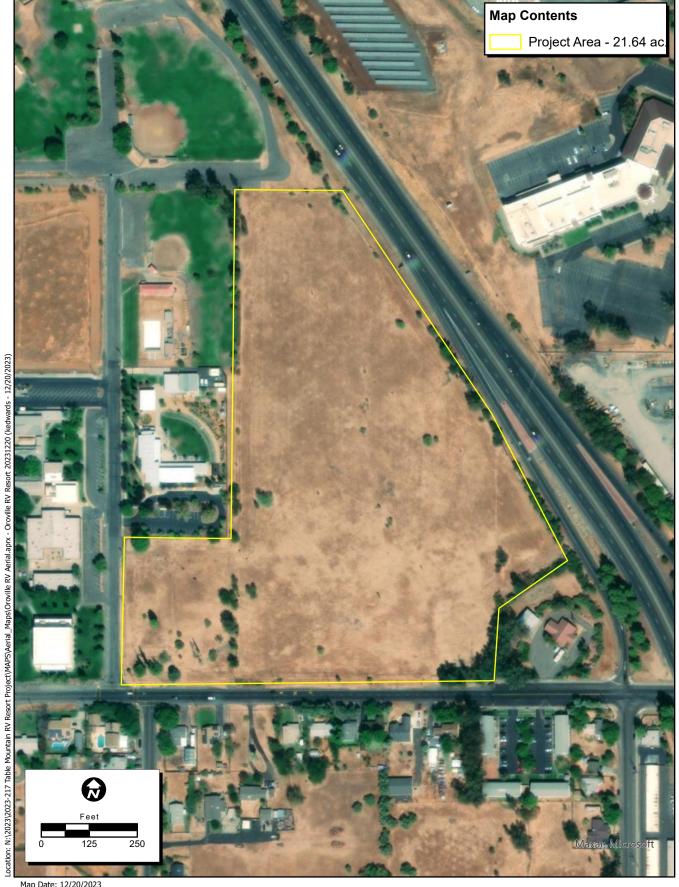
Pursuant to Public Resources Code section 21080.3.1, an agency is required to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

On October 8, 2024, the City of Oroville initiated the Tribal Consultation process notifying California Native American tribes that had previously submitted general consultation request letters pursuant to Section 21080.3.1(d) of the PRC. Within 30 days, the City received no response from the Tribes for further consultation. Thus, the Tribal Consultation concluded on November 8, 2024. Further information on potential Tribal Cultural Resources in the Project Area is provided in Section 4.18 of this Initial Study.



ECORP Consulting, Inc. ENVIRONMENTAL CONSULTANTS

Figure 2.0-1. Location and Vicinity



Map Date: 12/20/2023 Sources: Esri Imagery, Vivid, Maxar (2021)

Figure 2.0-2. Project Aerial ECORP Consulting, Inc. ENVIRONMENTAL CONSULTANTS



Photo 1. Overview of Project Site, facing west. Photo taken October 19, 2023.



Photo 2. Overview of Project Site, facing south towards single – family residences. Photo taken October 19, 2023.



Photo 3. Northern portion of the Project Site, facing Hearthstone School (southwest). Photo taken October 19, 2023.



Photo 4. Project site, facing north towards Highway 70 off ramp and Butte County service buildings beyond. Photo taken October 19, 2023.





3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

The environmental factors checked belone impact that is a Potentially Signific					
☐ Aesthetics	Hazards/Hazardous Materials	Recreation			
Agriculture and Forestry Resources	☐ Hydrology/Water Quality				
☐ Air Quality	Land Use and Planning	☐ Tribal Cultural Resources			
□ Biological Resources	Mineral Resources	Utilities and Service Systems	S		
☐ Cultural Resources	Noise	Wildfire			
☐ Energy	Paleontological Resources	Mandatory Findings of Sign	ificance		
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 DECLARATION will be prepared.	significant effect on the environment	, and a NEGATIVE			
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 "potent impact on the environment but at least or pursuant to applicable legal standards, an earlier analysis as described on attached s must analyze only the effects that remain	ne effect 1) has been adequately analy d 2) has been addressed by mitigatio sheets. An ENVIRONMENTAL IMPACT	yzed in an earlier document n measures based on the			
I find that although the Project could have significant effects (a) have been analyzed to applicable standards, and (b) have been DECLARATION, including revisions or miti further is required.	adequately in an earlier EIR or NEGAT n avoided or mitigated pursuant to th	IVE DECLARATION pursuant at earlier EIR or NEGATIVE			
Patrick Piatt, Director of Community Development and Planning City of Oroville	Date: <u>//・ ン</u> .	29			

Initial Study and Mitigated Negative Declaration

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

4.1.1 Environmental Setting

The Project Site is currently vacant and located north of Nelson Avenue and Chinchen Electric Supply, east of 6th Street, west of Highway 70, and south of the Nelson Park and Ballpark Complex and Highway 70. Surrounding uses include single-family homes to the south, and school and recreational uses to the west, including Hearthstone High School, Nelson Avenue Middle School, and Nelson Pool.

The 2030 City of Oroville General Plan Open Space, Natural Resources, and Conservation Element (City of Oroville 2015a) identifies a number of scenic resources available in the form of prominent land formations and preserves. These scenic resources include views of Table Mountain, the Feather River, and the foothills to the east. Additionally, land preserves are considered scenic resources in the city. While not all of these scenic areas are viewable from the Project Site, the preserves are discussed below:

Feather River Nature Center and Native Plant Park

The Feather River Nature Center and Native Plant Park is a stone structure located on Old Ferry Road on the south bank of the Feather River across the river from the Feather River Fish Hatchery. Constructed in the 1930s, it operated as a Works Progress Administration bathhouse and has been restored and converted into a Nature Center. The proposed Project is located approximately 1.54 miles away from the Feather River Nature Center and Native Plant Park.

Oroville Dam Area Preserve

The Oroville Dam Area Preserve includes the steeply sloped hillsides around the dam. This area could provide passive open space recreation opportunities for Oroville residents. The proposed Project is located approximately 1.9 miles away from the Oroville Dam Area Preserve.

Feather River Waterfront Preserve

The Feather River Waterfront Preserve is located between Highway 70 and the Feather River. Riverbend Park is part of this preserve. This area contains other active and passive recreation opportunities. The proposed Project is located approximately 0.9 miles away from the Feather River Waterfront Preserve.

Oroville Wildlife Refuge Preserve

The Oroville Wildlife Refuge Preserve begins at Highway 162, between the Feather River to the west and the Oroville Municipal Airport and Thermalito Afterbay to the east, continuing south to the Planning Area boundary. Mine tailings from Oroville's past fill much of the Wildlife Refuge. The proposed Project is located approximately 1.9 miles away from the Oroville Wildlife Refuge Preserve.

Thermalito Afterbay Preserve

Thermalito Afterbay also receives water diverted from Lake Oroville as part of the State Water Project. The Afterbay includes opportunities for boating, swimming and fishing. The Afterbay is adjacent to the

Oroville Wildlife Area and the Feather River Fish Hatchery Annex. The proposed Project is located approximately 5 miles from the Thermalito Afterbay Preserve.

North and South Thermalito Forebay Preserve

The North and South Thermalito Forebay receive water diverted from Lake Oroville as part of the State Water Project, one of the largest water and power systems in the world. North Thermalito Forebay offers recreation opportunities including swimming, boating and picnicking. South Thermalito Forebay also provides recreational opportunities including boating and fishing. Flat rice fields and grazing land surround the forebays. The proposed Project is approximately 2 miles away from the South Thermalito Forebay Preserve and 0.3 miles away from the North Thermalito Forebay Preserve, respectively.

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. The California Department of Transportation (Caltrans) can designate a highway 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.

There are no designated or eligible State Scenic Highways in the City of Oroville. According to California Department of Transportation (Caltrans), State Route (SR) 70 within the Feather River Canyon is listed as an eligible scenic highway. However, this portion of the SR70 is not within the area of the Project Site nor is it listed as an official scenic highway at the time of this report (Caltrans 2024).

General Plan

City of Oroville Open Space, Natural Resources, and Conservation Element

The City of Oroville's Open Space, Natural Resources, and Conservation Element addresses the City's setting, appearance, and historic resources. Goals and policies related to scenic views and visual character include:

Goal OPS-5:	Maintain and enhance the quality of Oroville's scenic and visual resources.
Policy 5.1:	Maintain the appearance of Oroville, as seen from the freeway, as a city to be visited, enjoyed and admired.
Policy 5.2:	Limit freeway-oriented signs. Combine freeway signs listing available accommodations and services, and allow only small identity signs on buildings adjoining the freeway.
Policy 5.3:	Maintain the scenic view of the Feather River and Table Mountain.
Policy 5.4:	Require new light fixtures within new development to be designed and sited so as to minimize light pollution, glare, and light trespass into adjoining properties.

4.1.2 Aesthetics (I) Environmental Checklist and Discussion

	ept as provided in Public Resources Code Section 99, 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?			\boxtimes	

Less Than Significant Impact

A scenic vista is a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. As previously described, the City of Oroville considers views of Table Mountain, the Feather River, the foothills to the east, and the various preserve areas significant and should be protected.

The current site is currently undeveloped, and the proposed Project would develop the Project Site and construct a Recreational Vehicle (RV) Resort with accompanying amenities and related improvements, and therefore would alter the views from Nelson Avenue, 6th Avenue and Highway 70. However, there are no scenic vistas or scenic highways located within the immediate project vicinity. The proposed Project would involve removing existing vegetation and trees within the project site but as part of the proposal involves planting 500 trees and 125 shrubs as part of the landscaping plan.

Section 17.28.020 of the City of Oroville Municipal Code establishes that maximum height of 60 feet in the C-2 zoning district. A maximum height of 60 feet in the C-2 zoning district would allow for the development of two-story buildings, which the proposed Project includes the construction of a banquet hall. With Project construction, views of Table Mountain to the northeast, currently experienced by the single-family residences southeast of the Project Site, would not experience any degradation of views as the Project is not located between these homes and Table Mountain. Additionally, the 2030 General Plan Policy P5.3 requires new development projects to be designed to maintain the scenic view of the Feather River and Table Mountain. Although views of the Feather River would not be possible due to the location of the Project Site being 0.6 miles south of the Project Site, distant views of Table Mountain would be available but may be partially blocked by existing urban uses. Additionally, the Project would be subject to the City's site plan and architectural review process in accordance with Chapter 16.16 of the City Municipal Code (City of Oroville 2022a). This review process ensures Project compatibility with the surrounding land uses and conformity with the City's goals of providing and enhancing views of local scenic resources. Therefore, the proposed Project would not have a substantial adverse effect on local scenic vista resources, and impacts would be less than significant.

	ept as provided in Public Resources Code Section 99, 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?				\boxtimes

No Impact

As stated above, according to Caltrans' list of designated Scenic Highways, the proposed Project is not located near or within a state scenic highway and therefore would not damage designated scenic resources, including but not limited to trees, outcroppings, and historic buildings within a state scenic highway. Therefore, no impacts are anticipated, and no mitigation measures are required.

	ept as provided in Public Resources Code Section 99, 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

As previously stated, approval of the Project would allow the development of a Recreational Vehicle (RV) Resort with accompanying amenities and related improvements on the 21.64-acre site. While there are no formal public viewing areas at the site, the site can be seen by the general public from Nelson Avenue and 6th Street. However, the site does not offer any distinctive or extraordinary characters that would make the site different from any of the other vacant land in the surrounding area. The site is not located immediately adjacent to any scenic views or preserve areas identified by the 2030 General Plan. The closest preserve is the North Thermalito Forebay Preserve, which is 0.3 miles away from the proposed Project Site.

All new development would be required to comply with the General Plan Community Design Element policies, which would assist in promoting the visual character of the City. In addition, the Project is subject to the City's Design Guidelines. The purpose of the Design Guidelines is to provide design guidance for projects within the City, promoting an improved aesthetic and functional quality of the community. The guidelines are intended to serve as recommendations focusing on the design of developments. The Design Guidelines provides direction for site planning, building design, landscape design, accessory structures, and lighting (City of Oroville 2015b).

The Project does propose signage that would be orienting toward Highway 70, but the City's 2030 General Plan policies and the Design Guidelines would be effective in reducing the visual prominence of and aesthetic impact of new development. Therefore, the proposed Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. As such, this impact would be considered less than significant, and no mitigation is required.

	ept as provided in Public Resources Code Section 99, 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 current Project Site is on vacant land with no existing sources of light or glare. Surrounding land uses and infrastructure provide sources of light experienced within the Project Site; sourced from the Chinchen Electric Supply, Hearthstone School, Highway 70, and Nelson Park. However, approval of the proposed Project would introduce future new sources of daytime glare and may change nighttime lighting and illumination levels. Lighting nuisances typically are categorized by the following:

Glare – Intense light that shines directly or is reflected from a surface into a person's eyes.

Skyglow/Nighttime Illumination – Artificial lighting from urbanized sources that alters the landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features.

Spillover Lighting – Artificial lighting that spills over onto adjacent properties, which could interrupt sleeping patterns or cause other nuisances to neighboring residents.

The main sources of daytime glare in the proposed Project vicinity would be from sun lighting reflecting from structures with reflective surfaces such as windows. Development under the proposed project would include warehouse buildings, banquet halls and other structures in support of the RV park. Building materials (e.g., reflective glass and polished surfaces) are the most substantial sources of glare. The amount of glare depends on the intensity and direction of sunlight, which is more acute at sunrise and sunset because of the angle the sun is lower during these times.

Artificial light is a source of glare during the nighttime hours. The sources of new and increased nighttime lighting and illumination include, the proposed halo solar wedge wall mounted lighting, solar LED bollard lighting, LED solar street lighting, LED outdoor posts lighting, and string lighting on the dining and club areas. There would also be lights associated with vehicular travel (e.g., car or RV headlights). Increased nighttime lighting and illumination could result in adverse effects to adjacent land uses through the light trespass into these areas and contribute to skyglow conditions.

Activities associated with proposed Project construction have the potential to increase lighting and glare within and around the Project Site. Sources of additional light and glare would emanate from area lighting

during any nighttime work, headlights from construction equipment, and the glare from construction equipment reflective surfaces. Although there is a potential to increase lighting and glare within and around the Project Site during construction, these sources would be temporary and would cease upon completion of the Project. During operations, interior and exterior lighting associated with the RV Park, cars driving in and out of the park, ambient area lighting in outdoor common spaces and walkways and frontage signs and security lighting would all be the primary sources within and around the Project Site.

Project development would be subject to existing development and design standards outlined in the City's Municipal Code. For instance, Section 17.12.010C states the following:

- a. Light fixtures, excluding illuminated signs, shall have a maximum height of 25 feet above grade, or the height of the nearest main building on the site, whichever is less. Additional height shall be allowed where necessary to provide adequate clearance for vehicular circulation, provided that the light fixture's height is no greater than necessary to provide the clearance.
- b. All light sources, excluding illuminated signs, shall include appropriate shielding to direct light away from the sky, surrounding properties and streets. Reflections or glare outside of the subject property shall be minimized.
- c. For sites that are within or adjacent to a residential district, or are separated by a street from a residential district, no light sources shall produce an illumination level in the residential district greater than one-quarter footcandle at any point measured 25 feet horizontally from the subject property. This requirement shall not apply to illuminated signs.

In addition, the City's Design Guidelines provide the following standards for lighting:

- 2. Lighting Fixture Height. Intent is to prevent light fixtures from creating excessive illumination on the site and its surroundings.
 - 2.1.1: Lighting sources should be kept as low to the ground as possible while ensuring safe and functional levels of illumination.
 - 2.1.2: Area lighting should be directed downward or employ control features so as to avoid light being directed offsite, as well as to avoid lighting of the night sky.
- 3. Lighting Levels. Intent is to ensure that lighting choices meet the site's needs while avoiding excessive illumination.
 - 3.1.1: Lighting should be located so as to minimize the impact of lighting upon adjacent buildings and properties, especially residential uses.
 - 3.1.2: In general, the location of lighting should respond to the anticipated use and not exceed the amount of illumination required by users.
 - 3.1.3: Illumination over an entire area or use of overly bright lighting is strongly discouraged.
 - 3.1.6: LED lighting and/or energy-efficient lighting is encouraged.

Adherence to the Design Guidelines and Municipal Code would reduce the impacts of daytime glare and nighttime lighting by requiring design to limit lighting leakage and glare. Therefore, this impact would be less than significant, and no mitigation is required.

4.1.3 Mitigation Measures

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

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

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 and is based on the suitability of soils for agricultural production, as determined by a soil survey conducted by the Natural Resources Conservation Service (NRCS). The DOC manages the California Important Farmland Finder, an interactive website program that identifies the Project Site as being within Urban and Built-Up Land (DOC 2024a).

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

Wo	uld 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 nonagricultural use?				\boxtimes

No Impact

As discussed above, the California Important Farmland Finder Map identifies the Project Site as Urban and Built-Up Land. Thus, implementation of the proposed Project would not 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. There would be no impact and mitigation is not required.

Wo	uld 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 Ir	mpact				
are u zonin	proposed Project Site and surrounding areas are not zonder Williamson Act contracts (DOC 2024b). The propag for agricultural uses or a Williamson Act contract. To ation is required.	oosed Project	would not conf	lict with exis	
			Less than Significant		
Wo	uld the Project:	Potentially Significant Impact	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))?				\boxtimes
No Ir	npact				
12220 defin cause	City Zoning Ordinance does not identify the Project Si 0(g)), timberland (as defined by PRC Section 4526), or ed by Government Code Section 51104(g)). Thus, project the rezoning of any of the above zoning designation ation is required.	timberland zo ject implemer	oned Timberlar ntation would n	nd Production ot conflict w	n (as
Wo	uld 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?				\boxtimes
No Ir	mpact				

See discussion under item c). No impact would occur, and no mitigation is required.

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

No Impact

See discussion under item a) and c), the proposed Project would not result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest. No impact would occur, and no mitigation measures are required.

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

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the Northern Sacramento Valley Air Basin (NSVAB), which encompasses the Project Site, pursuant to the regulatory authority of the air pollution control officer for the region, the Butte County Air Quality Management District (BCAQMD).

The NSVAB is composed of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, and Yuba Counties. Butte County has a Mediterranean climate, characterized by hot, dry summers and cool, wet winters. Winter weather is governed by cyclonic storms from the North Pacific, while summer weather is typically subject to a high pressure cell that deflects storms from the region. Diminished air quality within Butte County largely results from local air pollution sources, transport of pollutants into the area from the south, the NSVAB topography, prevailing wind patterns, and certain inversion conditions that differ with the season.

During the summer, high pressure conditions aloft can cause sinking air to form a subsidence inversion or "lid" over the region, confining pollution within a shallow layer near the ground that leads to photochemical smog (ozone) and visibility problems. The transport of pollutants near the top of the "lid" causes higher ozone impacts in foothill areas of Butte County compared with the valley floor. Because ozone production requires sunlight as part of the chemical reaction, ozone concentrations are highest from late spring through early fall.

In Butte County, mobile vehicle emissions are the primary source of nitrogen oxides (NO_x), a precursor to ozone development. Wood combustion is the largest source of fine particulate matter ($PM_{2.5}$) in Butte

County, particularly residential woodstove & fireplace use and managed open burning. Area wildfires can also contribute a large amount of ozone precursors and particulate matter when active.

Both the U.S. Environmental Protection Agency (USEPA) and the California Air Resource Board (CARB) have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants representing safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O₃), carbon monoxide (CO), particulate matter (PM), NO_x, sulfur dioxide (SO₂), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The portion of Butte County encompassing the Project Site is designated as a nonattainment area for the state standards for O₃, PM_{2.5} and coarse particulate matter (PM₁₀) and is designated as a nonattainment area for the federal standard of O₃ (CARB 2022).

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.

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:		Potentially 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 (CCAA) requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Northern Sacramento Valley Planning Area 2021 Triennial Air Quality Attainment Plan (2021 Plan) is the most recent air quality planning document covering Butte County. Air quality attainment plans are a compilation of new and previously submitted plans, programs (e.g., such as 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 2021 Plan provides population and vehicle miles traveled (VMT) projections for the entire NSVAB through the year 2040. The plan also includes control strategies necessary to attain the California O₃ standard at the earliest practicable date, as well as developed emissions inventories and associated emissions projections for the region.

The consistency of the proposed Project with the 2021 Plan is determined by its consistency with air pollutant emission projections in the plan. The 2021 Plan addresses growth by projecting the growth in emissions based on different indicators. For example, population forecasts provided by the California Department of Finance are used to forecast population-related emissions. Through the planning process, emission growth is offset by basin-wide controls on stationary, area, and transportation sources of air pollution. In other words, the plans and control measures in the 2021 Plan are based on information derived from projected growth in order to predict future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections for the City are based on the City's General Plan using the population projections establish by the Butte County Association of Governments (BCAG) in their Long-Term Regional Growth Forecast 2010-2035 report.

The Project Site has a General Plan designation of Intensive Commercial (C-2) which allows for more intensive commercial establishments, including those that deal in large, low-volume items and major repair services, or that require large, outdoor display and storage areas. Although the proposed Project would be amending the General Plan's land use designation to redesignate the Project Site to allow for the development of an RV Park with associated amenities, the new uses for the site will actually reduce impacts to air quality compared with development allowed under the current General Plan land use designations. This is because development of the Project Site under the current C-2 land use would attract heavy-duty trucks that emit substantial amounts of pollutants such as PM, NO_x, CO and ROG emissions while development of the site under the proposed Project would not result in heavy-duty truck trips. Furthermore, as shown in Tables 4.3-1 and 4.3-2, Project emissions would be generated at rates below all BCAQMD significance thresholds, which were developed to achieve attainment goals in Butte County. As such, the Project would not conflict with the NSVAB Air Quality Attainment Plan. There would be no impact.

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

Less Than Significant Impact

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

Air quality impacts were assessed in accordance with methodologies recommended by the BCAQMD. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Butte County. Operational air pollutant emissions were based on the site dimensions and emission sources identified on the Project Site plan and operational trip generation rates provided by Headway Transportation (2024). Refer to Appendix B for all CalEEMod output files.

Project Construction Emissions

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

Construction-generated emissions associated with the proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Appendix B for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted average daily construction-generated emissions for the proposed Project are summarized in Table 4.3-1. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BCAQMD's thresholds of significance.

Table 4.3-1. Construction-Related Criteria Air Pollutant Emissions								
Construction Year	ROG	NO _x	со	SO ₂	PM ₁₀	PM _{2.5}		
	Pounds Pe	r Day						
Construction Year One	3.86	36.02	34.10	0.06	21.38	11.60		
Construction Year Two	3.71	18.99	25.85	0.03	1.01	0.79		
BCAQMD Daily Significance Threshold	137	137	-	-	80	-		
Exceed BCAQMD Daily Significance Threshold?	No	No	N/A	N/A	No	N/A		
	Tons Per	Year						
Construction Year One	0.24	1.59	1.78	0.00	0.31	0.17		
Construction Year Two	0.39	2.00	2.68	0.00	0.10	0.08		
BCAQMD Annual Significance Threshold	4.5	4.5	-	-	-	-		
Exceed BCAQMD Annual Significance Threshold?	No	No	N/A	N/A	N/A	N/A		

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

Notes: Building construction, paving and painting assumed to occur simultaneously. Daily emissions taken for the season, summer or winter, with the highest output.

As shown in Table 4.3-1, emissions generated during Project construction would not exceed the BCAQMD's daily or annual thresholds of significance.

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

Project Operational Emissions

Operational-generated emissions associated with the proposed Project were calculated using CalEEMod. 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 ROGs and NO_X . Project-generated

increases in emissions would be predominantly associated with motor vehicle use. Long-term operational emissions attributable to the proposed Project are identified in Table 4.3-2.

Table 4.3-2. Operational-Related Criteria Air Pollutant Emissions								
Emission Source	ROG	NO _x	со	SO ₂	PM ₁₀	PM _{2.5}		
	Pounds Pe	r Day						
Mobile	2.37	2.89	18.98	0.03	2.67	0.72		
Area	0.99	0.01	1.13	0.00	0.00	0.00		
Energy	0.01	0.19	0.14	0.00	0.01	0.01		
Water	0.00	0.00	0.00	0.00	0.00	0.00		
Waste	0.00	0.00	0.00	0.00	0.00	0.00		
Refrigeration	0.00	0.00	0.00	0.00	0.00	0.00		
Total:	3.37	3.09	20.25	0.03	2.68	0.73		
BCAQMD Significance Threshold	25	25	-	-	80	-		
Exceed BCAQMD Significance Threshold?	No	No	N/A	N/A	No	N/A		

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

Notes: Emission projections are predominantly based on CalEEMod model defaults for Butte County as well as trip generation rates provided by Headway Transportation (2024). Daily emissions taken for the season, summer or winter, with the highest output.

As shown in Table 4.3-2, emissions generated during Project operations would not exceed the BCAQMD's daily thresholds of significance. Operational impacts would be less than significant.

		Potentially	With	Less than	
Wo	uld the Project:	Significant Impact	Mitigation Incorporated	Significant Impact	No Impact
c)	Expose sensitive receptors to substantial pollutant concentrations?			\boxtimes	

Less Than Significant Impact

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The Project is proposing an RV park with numerous amenities. The nearest sensitive receptor to the proposed improvements is Hearthstone High School located directly adjacent to the western Project Site boundary. Additionally, Nelson Ave Middle School is located to the west across 6th Street as well as residences located south across Nelson Avenue.

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term proposed Project-generated emissions of diesel particulate matter (DPM), ROG, NOx, CO, and PM₁₀ 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 which encompasses the Project Area is designated as a nonattainment area for the federal O₃ standard and is also a nonattainment area for the state standards for O₃, PM_{2.5} and PM₁₀ (CARB 2022). Thus, existing O₃, PM₁₀, and PM_{2.5} levels in the NSVAB are at unhealthy levels during certain periods. However, as shown in Table 4.4-1, the Project would not exceed the BCAQMD's significance thresholds for emissions.

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

Studies show associations between short-term O_3 exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O_3 may increase the risk of respiratory-related deaths. The concentration of O_3 at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of O_3 and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum O_3 concentration reaches 80 parts per billion. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NOx) in excess of the BCAQMD thresholds, which are set to be protective of human health and account for cumulative emissions in the NSVAB, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

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

in CO emissions more than any common significance thresholds. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM₁₀ and PM_{2.5}) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. PM₁₀ exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM and it contains PM_{2.5} exhaust as a subset. As with O₃ and NOx, the Project would not generate emissions of PM₁₀ that would exceed the BCAQMD's thresholds. The increases of these pollutants generated by the proposed Project would not on their own generate an increase in the number of days exceeding the NAAQS or CAAQS standards. Therefore, PM₁₀ and PM_{2.5} emissions, when combined with the existing PM emitted regionally, would have minimal health effect on people located in the immediate vicinity of the Project Site. Additionally, the Project's PM₁₀ and PM_{2.5} emissions are not expected to cause any increase in related regional health effects from these pollutants.

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

Operational Air Contaminants

Implementation of the proposed Project would not result in the development of any substantial sources of air toxins. There are no stationary sources associated with the implementation of the Project. The Project would not attract heavy-duty trucks, a substantial source of DPM emissions, which spend long periods queuing and idling at the site. Therefore, the Project would not be a significant source of TACs after implementation. The Project would not result in a potentially significant contribution to regional concentrations of nonattainment pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants. A less than significant impact would occur.

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

No Impact

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

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

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

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

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

4.3.3 Mitigation Measures

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

4.4 Biological Resources

This section is based on the analysis and recommendations presented in the Biological Resources Assessment (BRA) and Aquatic Resources Delineation (ARD) prepared for the proposed Project (ECORP 2024, Appendix C and Appendix D).

4.4.1 Environmental Setting

The Study Area is located within relatively flat to gently rolling terrain situated at an elevational range of approximately 245 to 275 feet above mean sea level (MSL) in the Northern High Sierra Nevada Foothills subregion of the Cascade Range Foothills floristic region of California (ECORP 2024).

4.4.1.1 Vegetation Communities

There are two vegetation communities within the proposed Project Area. These are Annual Grassland, and Eucalyptus Woodland.

The annual grassland within the proposed Project Area is dominated by nonnative annual grasses including perennial ryegrass (*Festuca perennis*), wild oats ((*Avena* sp.), medusahead (*Taeniatherum caput-medusae*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and broadleaf filaree (*Erodium botrys*). Scattered trees and shrubs occur within the annual grassland. The Project Area was grazed by cattle in the past and has a fire prevention break disced on the eastern border of the Project Site annually.

The annual grassland vegetation community most resembles the *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance as characterized by the Manual of California Vegetation. Seminatural alliances are strongly dominated by nonnative plants that have become naturalized in the state. Annaual grasslands occur in the open areas of the Project Site adjacent to the disturbed areas such as roads.

The southeast corner of the Project Area is composed of the *Eucalyptus* spp. Woodland Semi-Natural Alliance, a vegetation community dominated by *Eucalyptus* species. Blue gum eucalyptus (*Eucalyptus globulus*) was the dominant tree species in the overstory with European olive (*Olea europaea*) and cherry plum (*Prunus cerasifera*) as shrub and sapling layer. Subdominant shrubs and saplings include Himalayan blackberry (*Rubus armeniacus*), scarlet wisteria (*Sesbania punicea*), northern California black walnut (*Juncus effusus*), and perennial ryegrass (*Festuca perenne*).

4.4.1.2 Soils

According to the Web Soil Survey (NRCS 2023), one soil unit, or type, has been mapped within the Study Area: 318- Thompsonflat-Oroville, 0 to 9 percent slopes.

Thompsonflat-Oroville, 0 to 9 percent slopes soil unit is comprised of approximately 50 percent Thompsonflat, fine sandy loam and approximately 40 percent Oroville, gravely fine sandy loam. The remaining 10 percent is composed of the minor components Fernandez, sandy loam; Unnamed, loamy, duripan 10 to 20 inches; and, Unnamed, fine-loamy, bedrock densic 40 to 60 inches. Thompsonflat, fine sandy loam and minor components Fernandez, sandy loam and Unnamed fine-loamy, bedrock densic 40 to 60 inches are not considered hydric. Oroville, gravely fine sandy loam and minor component Unnamed, loamy, duripan 10 to 20 inches are considered hydric (NRCS 2023).

4.4.1.3 Potential Waters of the U.S.

Aquatic features within the Study Area include vernal pool, seasonal wetland, seasonal wetland swale, and an unnamed intermittent creek. Quantities of types of aquatic resources within the Study Area are

included in Table 4.4-1 and found in Figure 4.4-1, Aquatic Resources Delineation. ARD has been verified by the USACE in a letter dated January 11, 2023 SPK-2004-00233. Each type of aquatic feature observed within the Study Area is further described below:

Table 4.4-1. Aquatic Resources within the Study Area							
Type Acreage ¹							
Wetlands:							
Vernal Pool	0.036						
Seasonal Wetland	0.031						
Seasonal Wetland Swale	0.04						
Other Waters:							
Intermittent Creek	0.009						
Total	0.116						

¹The acreage has been verified by the USACE (January 11, 2024 SPK-2004-00233).

Vernal Pool

Vernal pools are topographic basins within a grassland community that are typically underlain with an impermeable or semipermeable soil layer near the surface, such as a hardpan or duripan. Direct rainfall and surface runoff inundate the pools during the wet season. The pools typically remain inundated and/or saturated through spring and are dry by land spring through the following wet season.

A total of 0.036-acre vernal pools were mapped within the Project Area. Dominate plant species with the vernal pool included common spike-rush (*Eleocharis palustris*) and annual rabbit's-foot grass (*Polypogon monspeliensis*).

Seasonal Wetland

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short, and they are commonly dominated by nonnative annual and sometimes perennial hydrophytic species.

A total of 0.031-acre of seasonal wetlands were mapped within the Project Area. Dominate plan species within the seasonal wetland included annual rabbit's-foot grass.

Seasonal Wetland Swale

Seasonal wetland swales are generally linear wetland features that convey precipitation runoff and support predominance of hydrophytic vegetation, hydric soil, and wetland hydrology, but do not exhibit an Ordinary High-Water Mark (OHWM). These are typically inundated for short periods during and immediately after rain events, but usually maintain soil saturation for longer periods during the wet season.

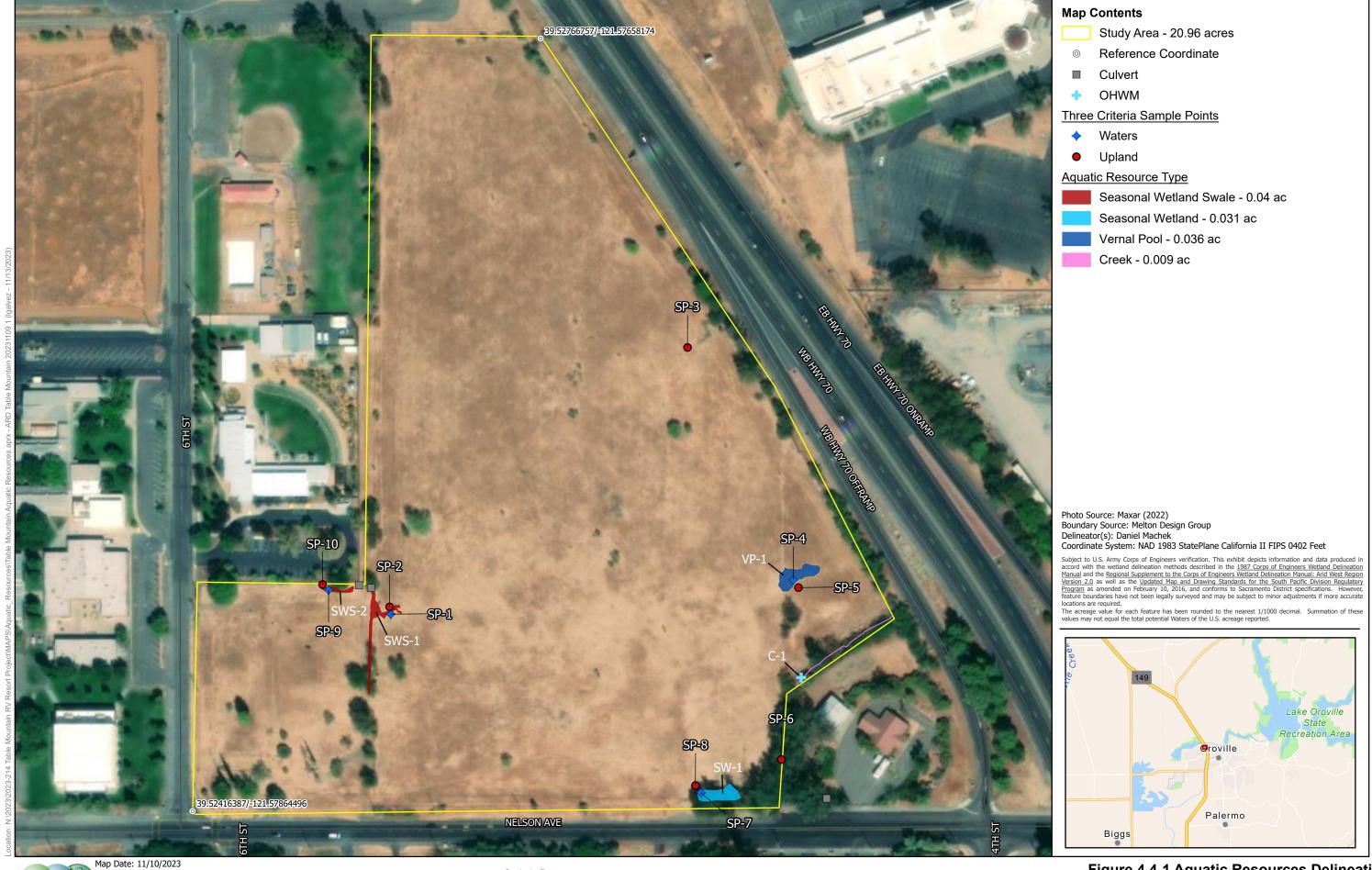
Two seasonal wetland swales (total of 0.04 acre) were delineated within the Project Area. Dominate plan species within the seasonal wetland swales included perennial ryegrass.

4.4.1.4 Other Waters

Intermittent Creek

Intermittent creeks are medium-order creeks that have seasonal surface water flow during the wet or rainy season. Intermittent creeks may not have surface water during dry periods. Runoff from precipitation is a supplemental source of water for stream flow. Intermittent streams often have narrower riparian corridors due to a deeper water table than perennial stream systems.

The unnamed intermittent creek is approximately 2 feet wide within the Project Area and had 1 to 2 inches of flowing water present during the site visit. The biologist mapped 0.009 acre (204 linear feet) of intermittent creek within the Project Area. Dominant plant species observed below the OHWM within the Study Area included water pepper, soft rush, and nutsedge. The unnamed intermittent creek was moderately vegetated above the OHWM within the Project Area. Plant species observed above the OHWM of the unnamed intermittent creek included blue gum eucalyptus, wild olive, and cherry plum in the tree stratum; cherry plum, wild olive, Himalayan blackberry (*Rubus armeniacus*), and red wisteria in the shrub/sapling stratum; and ripgut brome and wild oats in the herbaceous stratum.









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4.4.1.5 Special-Status Species

Special-status species identified during the literature review and database searches with the potential to occur in the region surrounding the Study Area are included in Appendix C. The BRA evaluates these special-status plant and animal species based on site-specific information to determine their potential to occur. Included in the BRA are the listing status for each species, a brief habitat description, approximate flowering period for plants and survey period for animals, and a determination on the potential to occur onsite.

Special Status Plants

A total of 27 special-status plant species were identified as having the potential to occur within the vicinity of the Study Area based on the literature review and database inquiries (Table 3 within Appendix C). Seventeen of the 22 special-status plant species were determined to be absent from the Study Area due to a lack of suitable habitat within the Study Area. No further discussion of the species considered to be absent from the Study Area is provided in this assessment. The 10 plant species with the potential to occur within the Study Area are described below.

Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not listed pursuant to either the federal or California Endangered Species Act (ESAs) but is designated as a California Rare Plant Rank (CRPR) 1B.2 species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grassland, and sometimes on serpentinite soils. Big-scale balsamroot blooms from March through June and is known to occur at elevations ranging from 150 to 5,100 feet above MSL. Big-scale balsamroot is endemic to California; the current range of this species includes Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2023).

There are no California Natural Diversity Database (CNDDB) occurrences of big-scale balsamroot within 5 miles of the Study Area (CDFW 2023). The annual grassland within the Study Area provides marginally suitable habitat for this species. Big-scale balsamroot has a low potential to occur within the Study Area.

Hoover's Spurge

Hoover's spurge (*Euphorbia hooveri*) is listed as threatened pursuant to the federal ESA, not listed pursuant to the California ESA, and is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in vernal pools. Hoover's spurge blooms from July through September (sometimes October) and is known to occur at elevations ranging from 80 to 820 feet above MSL. Hoover's spurge is endemic to California; its current range includes Butte, Glenn, Merced, Stanislaus, Tehama, and Tulare counties (CNPS 2023).

There are no CNDDB occurrences of Hoover's spurge within 5 miles of the Study Area (CDFW 2023). The vernal pool within the Study Area provides suitable habitat for this species. Hoover's spurge has potential to occur within the Study Area.

Adobe Lily

Adobe lily (*Fritillaria pluriflora*) is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.2 species. This species is a perennial bulbiferous herb that often occurs on adobe soils in chaparral, cismontane woodland, and valley and foothill grassland. Adobe lily blooms from February through April and is known to occur from 195 to 2,315 feet above MSL. Adobe lily is endemic to California; the current range of this species includes Butte, Colusa, Glenn, Lake, Napa, Solano, Tehama, and Yolo counties (CNPS 2023).

There are no CNDDB occurrences of adobe lily within 5 miles of the Study Area (CDFW 2023). The analogous adobe soil components and horizons within the Study Area represent marginally suitable habitat for this species. Adobe lily has a low potential to occur within the Study Area.

Ahart's Dwarf Rush

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is not listed pursuant to either the federal or California ESAs but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in mesic areas in valley and foothill grasslands. This species also appears to have an affinity for slight disturbance since it has been found on farmed fields and gopher turnings (USFWS 2005). Ahart's dwarf rush blooms from March through May and is known to occur at elevations ranging from 100 to 750 feet above MSL. Ahart's dwarf rush is endemic to California; the current range of this species includes Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba counties (CNPS 2023).

There is one CNDDB occurrence of Ahart's dwarf rush within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Ahart's dwarf rush has the potential to occur within the Study Area.

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 vernal mesic areas in chaparral, cismontane woodland, meadows, seeps, valley and foothill grasslands, and vernal pools. Red Bluff dwarf rush blooms from March through June and is known to occur at elevations ranging from 115 to 4,100 feet above MSL. Red Bluff dwarf rush is endemic to California; the current range of this species includes Butte, Placer, Shasta, and Tehama counties (CNPS 2023).

There are 15 CNDDB occurrences of Red Bluff Dwarf Rush within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Red bluff dwarf rush has the potential to occur within the Study Area.

Butte County Meadowfoam

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

to 3,050 feet above MSL. Butte County meadowfoam is endemic to California; the current known range for this species is Butte County (CNPS 2023).

There are two CNDDB occurrences of Butte County meadowfoam within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Butte County meadowfoam has the potential to occur within the Study Area.

Slender Orcutt Grass

Slender Orcutt grass (*Orcuttia tenuis*) is listed as threatened pursuant to the federal ESA, as endangered pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in often gravelly soils in vernal pools primarily on substrates of volcanic origin. This species is known to occur in the same type of vernal pool complexes as Sacramento Orcutt grass in Sacramento County; however, these species have not been observed coexisting in the same vernal pool. The median area of pools occupied by populations studied was 1.6 acres and ranged from 0.2 to 111.0 acres. Slender Orcutt grass blooms from May through September (sometimes October) and is known to occur at elevations ranging from 115 to 5,775 feet above MSL. Slender Orcutt grass is endemic to California; the current range for this species includes Butte, Lake, Lassen, Modoc, Plumas, Sacramento, Shasta, Siskiyou, and Tehama counties (CNPS 2023).

There are two CNDDB occurrences of slender Orcutt grass within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, and seasonal wetland swale within the Study Area provide suitable habitat for this species. Slender Orcutt grass has the potential to occur within the Study Area.

Ahart's Paronychia

Ahart's paronychia (*Paronychia ahartii*) is not listed as pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. Ahart's paronychia is an annual herb that occurs in cismontane woodland, valley foothill and grassland and vernal pools. Ahart's paronychia blooms from February through June and is known to occur at elevations ranging from 100 to 1,675 feet above MSL. Ahart's paronychia is endemic to California; the current range of this species includes Butte, Shasta, and Tehama counties (CNPS 2023).

There are two CNDDB occurrences of Ahart's paronychia within 5 miles of the Study Area (CDFW 2023). The annual grassland, vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Ahart's paronychia has potential to occur within the Study Area.

Butte County Golden Clover

Butte County golden clover (*Trifolium jokerstii*) is not listed pursuant to the federal and California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in vernal pools and mesic areas in valley and foothill grassland. Butte County golden clover blooms from March through May and is known to occur at elevations ranging from 165 to 1,575 feet above MSL. Butte County golden clover is endemic to California; its current range is Butte County (CNPS 2023).

There are eight CNDDB occurrences of Butte County golden clover within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Butte County golden clover has the potential to occur within the Study Area.

Greene's Tuctoria

Greene's tuctoria (*Tuctoria greenei*) is listed endangered pursuant to the federal ESA, listed as rare pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal pools. Greene's tuctoria blooms from May through July and is known to occur at elevations ranging from 100 to 3,510 feet above MSL. Greene's tuctoria is endemic to California; the current range of this species includes Butte, Fresno, Glenn, Madera, Merced, Modoc, Shasta, San Joaquin, Stanislaus, Tehama, and Tulare counties. It is considered extirpated from Fresno, Madera, San Joaquin, Stanislaus, and Tulare counties (CNPS 2023).

There is one CNDDB occurrence of Greene's tuctoria within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Greene's tuctoria has the potential to occur within the Study Area.

Invertebrates

A total of seven special-status invertebrate species were identified as having the potential to occur within the vicinity of the Study Area based on the database inquiries and literature review (Table 3). Four of the seven special-status invertebrate species were determined to be absent from the Study Area due to a lack of suitable habitat within the Study Area. No further discussion of the species considered to be absent from the Study Area is provided in this assessment. Three of the invertebrate species that have the potential to occur within the Study Area is described below.

Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened pursuant to the federal ESA. Vernal pool fairy shrimp may occur in seasonal ponds, vernal pools, and swales during the wet season, which generally occurs from December through May. This species can be found in a variety of pool sizes, ranging from less than 0.001 acre to more than 24.5 acres. The shrimp hatch from cysts when colder water (10°C [50°F] or less) fills the pool and mature in as few as 18 days, under optimal conditions. At maturity, mating takes place and cysts are dropped. Vernal pool fairy shrimp occur in disjunct patches dispersed across California's Central Valley from Shasta County to Tulare County, the central and southern Coast Ranges from northern Solano County to Ventura County, and three areas in Riverside County.

Crotch Bumble Bee

The Crotch's bumble bee (*Bombus crotchii*) is a candidate for listing as endangered under the California ESA. The historic range of the Crotch bumble bee extends from coastal areas east to the edges of the desert in central California south to Baja California del Norte, Mexico, excluding mountainous areas. The species was historically common throughout the southern two-thirds of its range but is now largely

absent from much of that area and is nearly extirpated from the center of its historic range, the Central Valley.

The Crotch's bumble bee inhabits open grassland and scrub habitats. The species visits a wide variety of flowering plants, although its very short tongue makes it best suited to forage at open flowers with short corollas. Plant families most commonly associated with Crotch's bumble bee include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae. Plants in the genera Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia have been reported as example food plants. The species primarily nests underground. Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or other debris. The flight period for Crotch's bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July. The flight period for workers and males is California is from late March through September with peak abundance in early July. CDFW's survey considerations define the queen flight season as February through March; the gyne flight season as September through October; and the colony active period (highest detection probability) as April through August. Factors that have been identified as a substantial threat to the survival and reproduction of Crotch's bumble bee include loss of habitat due to human landscape modifications (agricultural intensification, livestock grazing, urban development), increased use of herbicides and pesticides, competition, climate change, genetic factors, and disease and pathogen spillover.

No documented CNDDB occurrences of Crotch's bumble bee have been reported within 5 miles of the Study Area (CDFW 2023). The open annual grassland within the Study Area provides suitable nesting and foraging habitat for this species. Crotch's bumble bee has potential to occur within the Study Area.

Vernal Pool Tadpole Shrimp

The vernal pool tadpole shrimp (*Lepidurus packardi*) is listed as endangered pursuant to the federal ESA. This species inhabits vernal pools containing clear to highly turbid water, ranging in size from 0.001 to 89.0 acres. Vernal pool tadpole shrimp are distinguished from other vernal pool branchiopods discussed in this report by a large, shield-like carapace that covers the anterior half of their body. Cysts hatch during the wet season and the shrimp reach maturity in a few weeks. This species matures slowly and is long-lived, relative to other species. Vernal pool tadpole shrimp will continue to grow as long as the pools in which they occur remain inundated, and in some instances can survive for 6 months or longer. The geographic range of vernal pool tadpole shrimp extends from Shasta County to northern Tulare County in California's Central Valley, and in the central coast range from Solano County to Alameda County.

There are three CNDDB occurrences of vernal pool tadpole shrimp within 5 miles of the Study Area (CDFW 2023). The vernal pool and seasonal wetland within the Study Area provide suitable habitat for this species. Vernal pool tadpole shrimp has the potential to occur within the Study Area.

Amphibians

A total of three special-status amphibian species were identified as having the potential to occur within the vicinity of the Study Area based on the literature review and database inquiries (Table 3 within Appendix C). Two of the three amphibian special-status species were determined to be absent from the

Study Area due to a lack of suitable habitat within the Study Area. No further discussion of the species considered to be absent from the Study Area is provided in this assessment. One of the amphibian special-status species has the potential to occur within the Study Area and is described below.

Western Spadefoot

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

There is one CNDDB occurrence of western spadefoot within 5 miles of the Study Area (CDFW 2023). The vernal pool, seasonal wetland, seasonal wetland swales, intermittent creek and surrounding annual grassland provide suitable breeding and upland habitat for this species. Western spadefoot has the potential to occur within the Study Area.

Reptiles

A total of three special-status reptile species were identified as having the potential to occur in the vicinity of the Study Area based on the database inquiries and literature review (Table 3 of Appendix C). Two species were determined to be absent from the Study Area due to the lack of suitable habitat for the species. No further discussion of these species is provided in this assessment. A brief discussion of the one remaining species with potential to occur within the Study Area is provided below.

Blainville's Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is considered a CDFW SSC. This species is easily identifiable from many other lizards in California. Like all horned lizards, it is flattened dorsoventrally and possesses enlarged scales along the back of the head that resemble horns. This species can be distinguished from the desert horned lizard, a species with which it shares only a narrow portion of its range, by a double row of pointed fringe scales. This diurnal species can occur within a variety of habitats including scrubland, annual grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral. In the Central Valley, the species ranges from southern Tehama County southward. In the Sierra Nevada it occurs from Butte County south to Tulare County, and in the Coast Ranges it occurs from Sonoma County south into Baja California. It occurs from sea level to 8,000 feet MSL.

There is one CNDDB occurrence of Blainville's horned lizard within 5 miles of the Study Area (CDFW 2023). The annual grassland within the Study Area provides marginally suitable habitat for this species and the Study Area is below the typical elevational range for the species where it occurs north of Sacramento in

the Sierra Nevada Mountain range. Blainville's horned lizard has a low potential to occur within the Study Area.

Birds

A total of 26 special-status bird species were identified as having the potential to occur within the vicinity of the Study Area based on the database inquiries and literature review (Table 3 of Appendix C). Sixteen species were determined to be absent from the Study Area due to the lack of suitable habitat for the species. No further discussion of these species is provided in this assessment. Brief discussions of the 10 remaining species with potential to occur within the Study Area are provided below.

Osprey

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. Breeding habitat requirements include proximity to fish, open nest sites free from predators, and an ice-free fledging season. 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. 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. Breeding occurs from April to September.

There is one CNDDB occurrence of osprey within 5 miles of the Study Area (CDFW 2023). The large trees within the Study Area provide marginally suitable nesting habitat for this species. Osprey has low potential to occur within the Study Area.

Swainson's Hawk

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

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

There are no CNDDB occurrences of Swainson's hawk within 5 miles of the Study Area (CDFW 2023). The trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area

provide suitable nesting habitat for this species. The annual grassland vegetation community within the Study Area provide suitable foraging habitat for this species. Swainson's hawk has the potential to occur within the Study Area.

Burrowing Owl

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

There is one CNDDB occurrence of burrowing owl within 5 miles of the Study Area (CDFW 2023). The annual grassland vegetation community within the Study Area provides marginally suitable habitat for this species due to the scattered trees within the annual grassland. In addition, no California ground squirrels, their burrows, or burrow surrogates were observed during the site reconnaissance visit. Burrowing owl has low potential to occur within the Study Area.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is not listed pursuant to either the California or federal ESAs; but is considered a SSC by the CDFW. Loggerhead shrikes nest throughout California except the northwestern corner, montane forests, and high deserts. Loggerhead shrikes nest in small trees and shrubs in open country with short vegetation such as pastures, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands. The nesting season extends from March through July.

There are no CNDDB occurrences of loggerhead shrike within 5 miles of the Study Area (CDFW 2023). The annual grassland and Eucalyptus woodland vegetation communities provide suitable breeding habitat for this species. Loggerhead shrike has the potential to occur within the Study Area.

Oak Titmouse

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

There are no CNDDB occurrences of oak titmouse within the vicinity of the Study Area (CDFW 2023). The trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area provide suitable habitat for this species. Oak titmouse has the potential to occur within the Study Area.

Yellow-Billed Magpie

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

There are no CNDDB occurrences of yellow-billed magpie within 5 miles of the Study Area (CDFW 2023). The trees within the Eucalyptus woodland vegetation community within the Study Area provides suitable breeding habitat for this species. Yellow-billed magpie has potential to occur within the Study Area.

Lawrence's Goldfinch

Lawrence's goldfinch (*Spinus lawrencei*) is not listed pursuant to either the California or federal ESAs but is currently a BCC according to the USFWS. Lawrence's goldfinches breed west of the Sierra Nevada-Cascade axis from Tehama, Shasta, and Trinity counties south into the foothills surrounding the Central Valley to Kern County; and on the Coast Range from Contra Costa County to Santa Barbara County. Lawrence's goldfinches nest in arid woodlands usually with brushy areas, tall annual weeds, and a local water source. Nesting occurs during March through September.

There are no CNDDB occurrences of Lawrence's goldfinch within 5 miles of the Study Area (CDFW 2023). The Eucalyptus woodland vegetation community within the Study Area provides suitable breeding habitat for this species. Lawrence's goldfinch has the potential to occur within the Study Area.

Wrentit

The wrentit (*Chamaea fasciata*) is not listed in accordance with either the California or federal ESAs but is designated as a BCC by the USFWS. Wrentit are sedentary residents along the west coast of North America from the Columbia River south to Baja California. Wrentit are found in coastal sage scrub, northern coastal scrub, and coastal hard and montane chaparral, and breed in the dense understory of valley oak riparian, Douglas fir and redwood forests, early successional forests, riparian scrub, coyote bush, blackberry thickets, suburban parks, and larger gardens. Nesting occurs from March through August.

There are no CNDDB occurrences of wrentit within 5 miles of the Study Area (CDFW 2023). The shrubs within the Eucalyptus woodland vegetation community within the Study Area provides suitable breeding habitat for this species. Wrentit has the potential to occur within the Study Area.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) was granted emergency listing for protection under the California ESA in December 2014, but the listing status was not renewed in June 2015. After an extensive status review, the California Fish and Game Commission listed tricolored blackbirds as a threatened species in 2018. In addition, it is currently considered a USFWS BCC and a CDFW SSC. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California. Tricolored blackbirds nest in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. Tricolored blackbirds nesting habitat includes emergent marsh, riparian woodland/scrub, blackberry thickets, densely vegetated agricultural and idle fields (e.g., wheat, triticale, safflower, fava bean fields, thistle, mustard, cane, and fiddleneck), usually with some nearby standing water or ground saturation. They feed mainly on grasshoppers during the breeding season, but may also forage upon a variety of other insects, grains, and seeds in open grasslands, wetlands, feedlots, dairies, and agricultural fields. The nesting season is generally from March through August.

There is one CNDDB occurrence of tricolored blackbird within 5 miles of the Study Area (CDFW 2023). The blackberry shrubs adjacent to the intermittent creek within the Eucalyptus woodland vegetation community within the Study Area provide suitable breeding habitat for this species. Tricolored blackbird has the potential to occur within the Study Area.

Bullock's Oriole

Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal ESAs but is currently a BCC according to the USFWS. In California, Bullock's orioles are found throughout the state except the higher elevations of mountain ranges and the eastern deserts. They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees. Nesting occurs from March through July.

There are no CNDDB occurrences of Bullock's oriole within 5 miles of the Study Area (CDFW 2023). The trees within the Eucalyptus woodland vegetation community within the Study Area provide suitable breeding habitat for this species. Bullock's oriole has the potential to occur within the Study Area.

Other Protected Birds

All native or naturally occurring birds and their occupied nests/eggs are protected under the federal MBTA and California Fish and Game Code. The Study Area supports suitable nesting habitat for a variety of common birds protected under these regulations.

Special-Status Mammals

A total of five special-status mammal species were identified as having potential to occur in the vicinity of the Study Area based on the database inquiries and literature review (Table 3 of Appendix C). Two species were determined to be absent from the Study Area due to the lack of suitable habitat for the species. No further discussion of these species is provided in this assessment. Brief discussions of the three remaining mammal special species with potential to occur within the Study Area are provided below.

Pallid Bat

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

There are no CNDDB occurrences of pallid bat within the vicinity of the Study Area (CDFW 2023). Mature trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area may provide suitable day roosting habitat for this species. Pallid bat has the potential to occur within the Study Area.

Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral noes lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet above msl. Habitats used include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces.

Townsend's big-eared bat is a moth specialist with more than 90 percent of its diet composed of lepidopterans. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California.

There is one CNDDB occurrence of Townsend's big-eared bat within 5 miles of the Study Area (CDFW 2023). Mature trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area may provide suitable day-roosting habitat for this species. Townsend's big-eared bat has the potential to occur within the Study Area.

Western Red Bat

The western red bat (*Lasiurus frantzii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered a SSC by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending

from southern British Columbia in Canada through Argentina and Chile in South America and including much of the western U.S. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage 1 to 2 hours after sunset. This species is considered highly migratory; however, the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood.

There are no CNDDB occurrences of western red bat within 5 miles of the Study Area (CDFW 2023). Trees and shrubs within the Eucalyptus woodland vegetation community within the Study Area may provide suitable day roosting habitat for this species. Western red bat has the potential to occur within the Study Area.

4.4.1.6 Riparian Habitats and Sensitive Natural Communities

Five sensitive natural communities were identified as having potential to occur within the Study Area based on the literature review and database inquiries. These include Northern Hardpan Vernal Pool, Northern Basalt Flow Vernal Pool, Northern Volcanic Mud Flow Vernal Pool, Great Valley Cottonwood Riparian Forest, and Great Valley Willow Scrub. The aquatic features within the Study Area may be considered a sensitive natural community by CDFW; however, impacts to aquatic features are typically mitigated for during the Clean Water Act (CWA) Section 401/404, Regional Water Quality Control Board (RWQCB) Waste Discharge Requirements, and/or the CDFW 1602 SAA permitting process. Therefore, no recommendations are provided for mitigation of impacts to sensitive natural communities for the Project.

4.4.1.7 Wildlife Movement Corridors and Nurseries

The Study Area is located within the City of Oroville and is surrounded by development on all sides; therefore, the Study Area does not have habitat connectivity and does not represent wildlife movement or migration corridors.

There are no California Essential Habitat Connectivity areas within the Study Area (CDFW 2023).

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. This data is available through CDFW's Biogeographic Information and Observation System database or as occurrence records in the CNDDB and is supplemented with the results of the field reconnaissance. No nursery sites have been documented within the Study Area (CDFW 2023) and none were observed during the site reconnaissance.

4.4.2 Biological Resources (IV) Environmental Checklist and Discussion

Wo	uld 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?		\boxtimes		

Less Than Significant with Mitigation Incorporated

The Study Area supports potential habitat for special-status species within the impacted area. Potential effects to special-status species are summarized in the following sections by taxonomic group or species.

Special-Status Plants

There is potential for 10 federally or state-listed plan species in the Study Area. Construction of the proposed Project would permanently remove or alter marginally suitable or suitable potential habitat for special-status plans, and in the chance that special-status plant populations occur onsite they may be directly or indirectly impacted by development.

Implementation of Mitigation Measures BIO-1 would reduce impacts to special-status plans to a less than significant level.

Special-Status Invertebrates

There is potential habitat for three special-status invertebrate species to occur within the Study Area. The seasonal wetlands present onsite represent potential habitat for listed aquatic invertebrates. Project development would permanently remove or alter suitable potential habitat for special-status aquatic invertebrates, and in the chance that special-status invertebrates occur onsite they may be directly or indirectly impacted by development. As such, mitigation of these potential impacts is required. Implementation of Mitigation Measures BIO-2 and BIO-3 would reduce potential impacts to special-status invertebrates to a less than significant level.

Special-Status Amphibians

There is potential for one special-status amphibian species to occur within the Study Area. Project development would permanently remove or alter suitable potential habitat for special-status amphibians, and in the chance that special-status amphibians occur onsite they may be directly or indirectly impacted by development. As such, mitigation of these potential impacts is required. Implementation of Mitigation Measures BIO-4 would reduce potential impacts to special-status amphibians to a less than significant level.

Special-Status Reptiles

There is potential for one special-status reptile species to occur within the Study Area. Project development would permanently remove or alter suitable potential habitat for special-status reptiles, and in the chance that special-status reptiles occur onsite they may be directly or indirectly impacted by development. As such, mitigation of these potential impacts is required. Implementation of Mitigation Measures BIO-5 would reduce potential impacts to special-status reptiles to a less than significant level.

Special-Status and Other Protected Birds

There is potential foraging habitat for 12 special-status bird species in addition to raptors and other common species of birds protected under MBTA and the California Fish and Game Code. Project development would permanently remove or alter suitable potential habitat for special-status or other protected birds, and in the chance that special-status birds occur onsite they may be directly or indirectly impacted by development. As such, mitigation of these potential impacts is required. Implementation of Mitigation Measures BIO-6, BIO-7, and BIO-8 would reduce potential impacts to special-status reptiles to a less than significant level.

Special-Status and Day-Roosting Bats

There is potential for Pallid bat, Townsend's big-eared bat, Western Red Bat and other species of day-roosting bat species to occur within the Study Area. Project development would permanently remove or alter suitable potential habitat for special-status and day-roosting bats, and in the chance that special-status bats occur onsite they may be directly or indirectly impacted by development. As such, mitigation of these potential impacts is required. Implementation of Mitigation Measures BIO-9 and BIO-10 would reduce potential impacts to special-status reptiles to a less than significant level.

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

Less Than Significant with Mitigation Incorporated

Five sensitive natural communities were identified as having potential to occur within the Study Area based on the literature review and database inquiries (ECORP 2024). These include Northern Hardpan Vernal Pool, Northern Basalt Flow Vernal Pool, Northern Volcanic Mud Flow Vernal Pool, Great Valley Cottonwood Riparian Forest, and Great Valley Willow Scrub. The aquatic features within the Study Area may be considered a sensitive natural community by CDFW; however, impacts to aquatic features are typically mitigated for during the CWA Section 401/404, RWQCB Waste Discharge Requirements, and/or the CDFW 1602 Streambed Alteration Application (SAA) permitting process. Therefore, if the proposed Project requires the removal of riparian vegetation, including the Eucalyptus woodland vegetation,

Mitigation Measure BIO-11 shall be incorporated. Therefore, impacts would be reduced to a less than significant level.

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

As discussed above in Section 4.4.1.3 and 4.4.1.4, a total 0.116 acres of Waters of the U.S. regulated by the USACE have been mapped within the Study Area. Therefore, they are regulated by Sections 404 and 401 of the Clean Water Act and/or the Porter-Cologne Water Quality Control Act. The intermittent drainage is also subject to regulation under Section 1602 of the California Fish and Game Code. These features could be directly or indirectly impacted by Project activities. Direct impacts to aquatic resources would include any grading, trenching, excavation, or placement of temporary or permanent fill within a regulated feature. Indirect impacts may include inadvertent encroachments, changes in hydrology, and runoff and erosion from the Project Area.

Currently, the proposed Project is designed to avoid all wetland features. In addition, the proposed Project would have a SWPPP. The SWPPP would contain a site map that shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the Project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. The SWPPP must also include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges.

The proposed Project would be required to prepare and comply with an approved SWPPP and is currently planned to avoid all aquatic resources. Therefore, the potential to impact state or federally protected wetlands would be less than significant impact.

Wo	uld the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impac
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
No lı	npact				
_	ation corridors. Additionally, there is no fish habitat w	•		Jie, lilete Wi	ii DC
	npact to migratory fish or wildlife movement within the	Potentially Significant	Less than Significant with Mitigation	Less than Significant	No
	uld the Project: Conflict with any local policies or ordinances protecting biological resources, such as a tree	Potentially	Less than Significant with		
e)	uld the Project: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Than Significant Impact	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Significant Impact	Impac
e) Less	uld the Project: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Significant Impact	Impac
e) Less The p Code	uld the Project: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Than Significant Impact proposed Project will require some tree removal prior	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Significant Impact	Impac

No Impact

f)

There is no adopted Habitat Conservation Plan (HCP) or other approved local, regional, or state conservation plans at or near the Project Site. Therefore, the Project would have no impact in this area.

4.4.3 Mitigation Measures

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community

Conservation Plan, or other approved local, regional, or state habitat conservation plan?

BIO-1: Special-Status Plant Habitat Avoidance. Perform focused plant surveys of the Project site according to CDFW, CNPS, and USFWS protocols prior to construction (CDFG 2009; CNPS 2001; USFWS 1996). Surveys shall be conducted by a qualified biologist according to the

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blooming period for target species and timed according to the appropriate phenological stage for identifying target species. Known reference populations will be visited and/or local herbaria records should 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.

If special-status plants are identified within 25-feet of the Project Site, implement the following measures:

The Project will avoid occurrences of special-status plant species by establishing and clearly demarcating avoidance zones around the plant occurrences prior to construction. Avoidance zones should include the extent of the special-status plants plus a minimum 25-foot buffer, unless otherwise determined by a qualified biologist, and should be maintained until the completion of construction. Additional measures such as seed collection and/or transplantation may be developed in consultation with CDFW and the CEQA lead agency if special-status plant species are found within the Project Site and avoidance of the species is not possible.

BIO-2: Federally Listed Branchiopods. If the Project proposes impacts to any of the wetland features within the Study Area, then the following measures are recommended to minimize potential impacts to federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp:

Conduct USFWS protocol-level dry and wet season surveys to determine presence or absence of vernal pool fairy shrimp and vernal pool tadpole shrimp, or if surveys are not conducted, presence should be assumed for both species within suitable habitat. If no federally listed shrimp are found during protocol-level surveys, results are accepted by the CEQA lead agency, and surveys are considered recent at the time of Project construction, no further measures pertaining to federally listed branchiopods are recommended. Repeat surveys may be required if prior surveys are not considered recent or not accepted by the CEQA lead agency at the time of construction.

If presence of federally listed branchiopod is determined or presumed, obtain take coverage from USFWS under Section 7 or Section 10 of the federal ESA and preserve federally listed branchiopod habitat (e.g., vernal pools) onsite and/or at an offsite mitigation property at a minimum ratio of 1:1 and as agreed upon through consultation with USFWS. Comply with all avoidance and/or minimization measures of the USFWS BO or HCP. Measures may include implementation of Best Management Practices and erosion control measures to prevent direct and indirect effects to avoided federally listed branchiopod habitat.

BIO-3: Crotch Bumble Bee. If the Crotch's bumble bee is no longer a Candidate or formally listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.

If the Crotch's bumble bee is legally protected under the California ESA as a Candidate or Listed species at the time ground-disturbing activities are scheduled to begin,

preconstruction surveys shall be conducted in accordance with CDFW's Survey Considerations for California ESA Candidate Bumble Bee Species (CDFW 2023) the season immediately prior to Project implementation. A minimum of three Crotch's bumble bee preconstruction surveys shall be conducted at two- to four-week intervals during the colony active period (April through August) when Crotch's bumble bee are most likely to be detected. Non-lethal surveys shall be completed by a biologist who either holds a Memorandum of Understanding to capture and handle Crotch's bumble bee (if netting and chilling protocol is to be utilized), or by a CDFW-approved biologist who is experienced in identifying native bumble bee species (if surveys are restricted to visual surveys that will provide high-resolution photo documentation for species verification). The surveyor shall walk through all areas of suitable habitat focusing on areas with floral resources. Surveys shall be completed at a minimum of one person-hour of searching per 3 acres of suitable habitat during suitable weather conditions (sustained winds less than 8 miles per hour, mostly sunny to full sun, temperatures between 65- and 90-degrees Fahrenheit) at an appropriate time of day for detection (at least one hour after sunrise and at least two hours before sunset, though ideally between 9:00 a.m. and 1:00 p.m.)

If Crotch's bumble bees are detected, CDFW shall be notified by the designated biologist as further coordination may be required to avoid or mitigate certain impacts. At a minimum, two nesting surveys shall be conducted with focus on detecting active nesting colonies within one week and the final survey within 24 hours prior to ground-disturbing activities that are scheduled to occur during the flight season (February through October). If an active Crotch's bumble bee nest is detected, an appropriate no-disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established around the nest to reduce the risk of disturbance or accidental take and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified biologist deems the nesting colony is no longer active. If no nests are found but the species is present, a fulltime qualified biological monitor shall be present during vegetation or ground-disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). Because bumble bees move nest sites each year, two preconstruction nesting surveys shall be required during each subsequent year of construction, regardless of the previous year's findings, whenever vegetation and grounddisturbing activities are scheduled to occur during the flight season if nesting and foraging habitat is still present or has re-established.

BIO-4: Western Spadefoot. A qualified biologist shall conduct at least one set (up to two sets spaced at least 10 days apart) of preconstruction daytime and nighttime surveys for all life stages of western spadefoot to be conducted when surface water is ponded in aquatic features if feasible between October through May (when suitable environmental conditions are met) prior to Project initiation. Surveys will be conducted during or following rain events

and in nonfreezing temperatures. Daytime surveys of aquatic features will be conducted with the aid of binoculars and polarized sunglasses for all life stages of western spadefoot as well as adjacent upland habitat for burrowing adults and juveniles. Nighttime audio detection and eye-shine surveys will be conducted with the aid of binoculars and flashlight for calling males in and near aquatic features.

A preconstruction survey report shall be prepared and submitted to the USFWS and CDFW, as appropriate, that includes the methods, results, and recommendations based on the survey. If the preconstruction survey(s) are conducted according to the above methods and no detections of western spadefoot occur within the Study Area, then no further measures need to be taken. If the preconstruction survey(s) are conducted according to the above methods and there are detections of western spadefoot within the Study Area, then the qualified biologist will relocate the individuals to suitable breeding habitat (aquatic features that pond water for 30+ days) outside of the Study Area and the following measures will be implemented.

- No Project activities shall occur from 30 minutes before local sunset time to 30 minutes after local sunrise time, and 48 hours after a significant rain event with a National Weather Service forecast of greater than or equal to 0.5 inch of rainfall within a 24-hour period.
- No equipment or vehicle refueling, maintenance, or staging shall occur within 100 feet
 of an aquatic feature that represents western spadefoot breeding habitat, as
 determined by a qualified biologist. The Project will coordinate the location of the
 equipment and vehicle staging area with the qualified biologist.
- Wildlife exclusion fencing will be installed around aquatic features that represent western spadefoot breeding habitat and shall be checked daily by a qualified biologist to relocate encountered individuals and ensure the fencing is intact and functioning properly. Wildlife exclusion fencing installed around aquatic features with positive detections of western spadefoot will be installed 40 meters from the extent of the aquatic feature. Project personnel will allow any encountered individuals to leave the site on their own volition or will be relocated by a qualified biologist to suitable breeding habitat.
- Prior to installation of wildlife exclusion fencing, a qualified biologist will conduct a clearance survey of the aquatic features and associated upland habitat. Wildlife exclusion fencing shall be installed under supervision and direction of a qualified biologist to avoid small mammal burrow refugia to the greatest extent possible.
- Any erosion or sediment control devices (such as straw wattles or erosion blankets)
 implemented within 500 feet of aquatic features that represent western spadefoot
 breeding habitat shall not contain materials that could cause entanglement of western
 spadefoot such as monofilament or any other nonbiodegradable material.

- Blainville's Horned Lizard. Conduct a preconstruction survey for Blainville's horned lizard within the Study Area 48 hours prior to construction activities. Any Blainville's horned lizard individuals discovered in the Project work area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.
- **BIO-6**: **Swainson's Hawk.** If Project activities are scheduled during the Swainson's hawk nesting season (March 1 to August 31), then prior to beginning work on the Project a qualified biologist shall survey for Swainson's hawk nesting activity. The survey area shall include a 0.5-mile distance surrounding the Project site. The qualified biologist shall conduct surveys according to the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee 2000) or, if proposing an alternate survey methodology, shall submit the proposed survey timing and methods to CDFW for review and written approval prior to initiation of surveys. Survey results shall be submitted to CDFW for review. If Swainson's hawk nesting activity is observed during the survey, then the survey results shall be submitted to CDFW for review and acceptance prior to starting Project activities. If the qualified biologist identifies nesting Swainson's hawks, then the biologist shall recommend a no-disturbance buffer, and the contractor shall implement the buffer under the supervision of a qualified biologist. Project activities shall be prohibited within the no-disturbance buffer between March 1 to August 31, unless otherwise approved in writing by CDFW, which may include consultation pursuant to California ESA and an Incidental Take Permit, or a qualified biologist determining that the nest is no longer active. If there is a lapse in Project-related work of 14 days or longer, then an additional survey shall be conducted prior to resuming Project activities.
- BIO-7: Burrowing Owl. A preconstruction survey for nesting burrowing owl will be conducted by a qualified biologist within 14 days prior to commencement of Project activities within the Study Area and a 250-foot buffer. Surveys shall be conducted at appropriate times and in appropriate weather conditions to maximize detection. If active burrowing owl burrows are found, an avoidance buffer will be immediately established, and an avoidance plan will be prepared in consultation with CDFW prior to the commencement of any ground-disturbing activities.
- BIO-8: Tricolored Blackbird. Prior to initiation of construction activities in all Project work areas and within 1,300 feet of Project work areas, a qualified biologist shall conduct preconstruction surveys to evaluate the presence of tricolored blackbird nesting colonies. In instances where an adjacent parcel is not accessible to survey because the qualified biologist was not granted permission to enter, the qualified biologist will scan all potential nest colony sites from the adjacent property, roadsides, or other safe, publicly accessible viewpoints, without trespassing, using binoculars and/or a spotting scope to look for tricolored blackbird nesting activity.

Surveys should be conducted at least twice with at least one month between surveys during the nesting season one year prior to initial ground disturbing activities if feasible, and the year of ground-disturbing activities (required). If ground-disturbing activities will occur in the Project work area during the nesting season, three surveys shall be conducted within 15 days prior to ground-disturbing activities, with one of the surveys occurring within five days prior to the start of ground-disturbing activities. The survey methods will be based on Kelsey (2008), or a similar protocol approved by CDFW based on site-specific conditions.

BIO-9: Pallid Bat, Townsend's Big Eared Bat, and Day Roosting Bats. If trees are scheduled to be removed or trimmed, then a qualified bat biologist will conduct a bat habitat assessment for suitable bat roosting habitat prior to any construction activities. The habitat assessment should be conducted one year prior to the initiation of construction activities, if feasible, and no less than 30 days prior to the initiation of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat and/or signs of bat use are identified during the assessment, the roosting habitat should be avoided to the extent possible.

If avoidance of the identified bat roosting habitat is not feasible, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting bats. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees. The Project-specific Bat Management Plan shall include the requirement for an emergence and/or preconstruction survey for roosting bats, roost removal timing and methodology; and will include as necessary and appropriate the inclusion of acoustic monitoring, no-disturbance buffers, methods and materials for passive exclusion of bats, species-specific habitat replacement mitigation, and/or post-construction mitigation monitoring.

Emergence surveys shall not be conducted during the bat inactive/hibernation period (typically October 15 through March 1, or when nighttime low temperatures are 45 degrees Fahrenheit or lower and rain is not over 0.5 inch in 24 hours), as bats are not detectable using emergence survey methods during their inactive period. If a maternity roost is located, that roost will remain undisturbed until after the maternity season or until a qualified biologist has determined the roost is no longer active.

If tree removal/trimming occurs outside of the bat maternity season and outside of bat hibernation season, tree removal during the weather parameters described shall be conducted after bat exclusion has been installed and left in place for no less than three days prior to removal/trimming, or using the two-step tree removal methods described below:

- As much as feasible, vegetation and trees within the area that are not suitable for roosting bats will be removed first to provide a disturbance that may reduce the likelihood of bats using the habitat.
- Two-step tree removal will occur over two consecutive days under the supervision of a qualified bat biologist. On Day 1, small branches and small limbs containing no cavity,

crevice, or exfoliating bark habitat on habitat trees (or outer fronds in the case of palm trees), as identified by a qualified bat biologist are removed first, using chainsaws only (i.e., no dozers, backhoes). The following day (Day 2), the remainder of the tree is to be felled/removed. The intention of this method is to disturb the tree with noise and vibration and branch removal on Day 1. This should cause any potentially present day-roosting bats to abandon the roost tree after they emerge for nighttime foraging. Removing the tree quickly the next consecutive day should avoid reoccupation of the tree by bats. If bats are observed during the two-step removal process, the biologist will be notified, the tree will be left until the next day, and the biologist will inspect the tree to ensure the tree does not contain bats prior to disturbance. If bats remain the following day, CDFW will be notified and measures will be submitted, such as methods for passive bat exclusion, for written acceptance prior to implementation and tree disturbance.

If bat roost mitigation is required, roost mitigation will be installed as far in advance of the bat maternity season as possible, but no less than 30 days prior to roost removal.

- BIO-10: Western Red Bat. If shrubs or trees are proposed to be removed or trimmed and determined by a qualified bat biologist to be suitable day-roosting habitat for western red bat, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting western red bats. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees and shrubs. The Project-specific Bat Management Plan shall include the requirement for preconstruction acoustic surveys for western red bats, a requirement for a preconstruction survey report including methods, results, and recommendations based on the acoustic survey submitted to CDFW, roost removal timing outside of the maternity and hibernation seasons and methodology; and will include as necessary and appropriate the inclusion of no-disturbance buffers, methods and materials for bat deterrents, and/or species-specific habitat replacement mitigation.
- BIO-11: Riparian Habitats and Sensitive Natural Communities. A SAA, pursuant to Section 1602 of the California Fish and Game Code, must be obtained for any activity that will impact the intermittent creek and associated riparian habitat. Minimization and mitigation measures would be developed during consultation with CDFW as part of the SAA process to ensure protections for affected fish and wildlife resources are implemented.

4.5 Cultural Resources

ECORP Consulting, Inc. prepared a Cultural Resources Inventory Report (ECORP 2024c) 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. This document is confidential but the appropriate persons and lead agency have a copy of the document. However, the contents of the Cultural Resources Inventory report has been summarized in this section below.

Cultural resources include pre-contact archaeological sites, historic archaeological sites, and historic built environment sites. Pre-contact archaeological sites are places that contain the material remains of activities carried out by the native population of the area (i.e., Native Americans) prior to the arrival of Europeans in the Project Area. Places that contain the material remains of activities carried out by people after the arrival of Europeans are considered historic archaeological sites. Historic built environment features include houses, garages, barns, commercial facilities, industrial facilities, community buildings, and other buildings, structures and facilities that are more than 50 years old. Historic built environment features may also have associated archaeological deposits, such as abandoned wells, cellars, privies, refuse deposits, and foundations of former outbuildings.

The information provided below is an abridged version of the Cultural Resources Inventory Report and is included here to provide a brief context of the potential cultural resources in the Project Area. Due to the sensitive nature of cultural resources and their records and documentation, which are restricted from public distribution by state and federal law, the IS/MND appendices do not include the cultural resources report; 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 the City of Oroville.

4.5.1 Environmental Setting

The Project Area consists of 21.64 acres of property located in Section 1 of Township 19 North, Range 3 East and Sections 6 and 7 of Township 19 North, Range 4 East, Mount Diablo Base and Meridian, as depicted on the 1970 (photorevised 1984) U.S. Geological Survey (USGS) Oroville, California 7.5-minute topographic quadrangle map. It is also known as Assessor's Parcel Numbers (APNs) 031-020-025, 031-020-049, 031-020-050, and 031-020-060, which are located on the northeastern corner of Nelson Avenue and 6th Street in the City of Oroville.

4.5.1.1 Area of Potential Effects

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

The horizontal APE consists of all areas where activities associated with a project are proposed and, in the case of this Project, equals the Project Area subject to environmental review under the National Environmental Policy Act (NEPA) and CEQA. This includes areas proposed for construction, vegetation removal, grading, trenching, stockpiling, staging, paving, and other elements in the official Project description. The horizontal APE is illustrated in Figures 1 and 2 and represents the survey coverage area within Appendix E.

The vertical APE is described as the maximum depth below the surface to which excavations for project foundations and facilities will extend. Therefore, the vertical APE for this Project includes all subsurface

areas where archaeological deposits could be affected. The subsurface vertical APE varies across the Project but could extend as deep as 20 feet below the current surface for the installation of utilities; therefore, a review of geologic and soils maps was necessary to determine the potential for buried archaeological sites that cannot be seen on the surface.

The vertical APE also is described as the maximum height of structures that could impact the physical integrity and integrity of setting of cultural resources, including districts and traditional cultural properties. For this Project, the above-surface vertical APE is assumed to be as high as 50 feet above the surface, which is the typical maximum height of the proposed outbuildings.

4.5.1.2 Cultural Resources Records Search

ECORP requested a records search for the Project Area at the Northeast Information Center (NEIC) of the CHRIS at California State University, Chico on January 5, 2024. The purpose of the records search was to determine the extent of previous surveys within a 0.5-mile (800-meter) radius of the proposed Project location, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. NEIC staff completed and returned the records search to ECORP on January 25, 2024.

In addition to the official records and maps for archaeological sites and surveys in Butte County, the following references were also reviewed: Built Environment Resource Directory; Historic Property Data File for Butte County; the National Register Information System (National Park Service [NPS] 2022); Office of Historic Preservation, California Historical Landmarks; California Points of Historical Interest; Directory of Properties in the Historical Resources Inventory; Caltrans Local Bridge Survey; Caltrans State Bridge Survey; and *Historic Spots in California*.

Other references examined include a RealQuest Property Search and historic General Land Office (GLO) land patent records and review of historic maps and aerial photographs for any indications of property usage and built environment.

4.5.1.3 Ethnographic and Historic Setting

The current Project Site falls within the ethnographic tribal territory of the Maidu, located in the lower foothills of the western slopes of the Sierra Nevada and in the periphery of the Northern Sacramento Valley. The Maidu, on the basis of cultural and linguistic differences, have been differentiated into three major related divisions: the Northeastern (Mountain Maidu), Northwestern (Konkow), and Southern (Nisenan). Because many believe the Mountain Maidu and Konkow to be so closely related, ethnographers tended to group them as one.

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

The Project Site is located in the central portion of Butte County. Butte County was one of the original 27 counties in California, and originally encompassed a much larger area than it does today. It was named for the landform now known as the Sutter Buttes, located in present-day Sutter County to the south. In the latter part of the 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. Other hunters and settlers in the Sacramento Valley began to travel on the Hudson Bay Trail to Oregon and then south to California. John Bidwell came to Sutter's Fort in California using this route. He mapped the upper reaches of the Sacramento Valley. People used Bidwell's maps to identify land when applying for land grants from the Mexican Government.

4.5.1.4 Record Search and Previous Research

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

Fifteen previous cultural resource investigations have been conducted in or within 0.5 mile of the Project Area, covering approximately 50 percent of the total area surrounding the property within the records search radius. Of the 15 studies, two were conducted within the Project Area and the other 13 were within the 0.5-mile radius. These studies revealed the presence of pre-contact sites, including lithic scatters and habitation sites, and historical sites, including rock walls and sites associated with historic mining activities. The previous studies were conducted between 1974 and 2016 and vary in size from 1.5 linear miles to over 15,000 acres.

The results of the records search indicate that the entire Project Area has been previously surveyed for cultural resources; however, these studies were conducted in smaller segments, at different times, by different consultants, as many as 45 years ago under conditions and using methods now considered obsolete; therefore, ECORP conducted a pedestrian survey of the Project Area.

The records search also determined that three previously recorded historic-era cultural resources are located within 0.5 mile of the Project Area (Table 2 of Appendix E). All three resources are historic-era sites associated with early European-American ranching and mining activities and the California State Water Project. No previously recorded cultural resources are within the Project Area; however, one previously recorded historic-era cultural district borders the Project Area to the north: P-4-4280, the Oroville District of the California Water Project.

4.5.1.5 Records

The OHP's BERD for Butte County (dated September 23, 2022) listed two resources within 0.5 mile of the Project Area: Property numbers 105440 and 105444; these resources comprise two Oroville Ranger Unit Headquarters Equipment Sheds, both of which are located at 176 Nelson Avenue, approximately 0.3 mile east of the Project Area.

The National Register Information System failed to reveal any eligible or listed properties within the Project Area. The nearest National Register properties are the Oroville Chinese Temple and Fong Lee

Company, which are located at 1500 Broderick Street in Oroville, approximately 1 mile southeast of the Project Area.

ECORP reviewed resources listed as CHLs by the OHP on January 10, 2024. The nearest listed landmark is #770: Chinese Temple (plaque located 1 mile southeast of the Project Area).

Historic Spots in California mentions that Butte County is one of California's original 27 counties. Early pioneers used the term *Butte* to identify a high place, mountain, or mountain range. In this case, the Sutter Buttes are high hills in Sutter County, south of the Project Area.

Historic GLO land patent records from the BLM's patent information database revealed that three patents were issued for the Project Area to two entities, using two different programs. The Oregon and California Railroads Act of 1866 (14 Stat 239) made federal land available for railroad companies to build a railroad line from San Francisco, California to Portland, Oregon.

The review of aerial photographs and maps of the Project Area provides information on the past land uses of the Project Area and potential for buried archaeological sites. The Project Area was used as an orchard until sometime between 1970 and 1984 when the orchard was removed; the property has remained vacant land since. Residences and agricultural outbuildings were present within the southern portions of the Project Area in varying states until 2003, when they gradually disappeared, leaving vacant land.

4.5.2 Cultural Resources (V) Environmental Checklist and Discussion

Wo	uld 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 Section 15064.5?				

Less Than Significant Impact

The records search and the 2024 field survey that was conducted by ECORP Consulting, Inc. identified the remnants of two historic-period residences within the proposed Project Area that meet the age threshold of 50 years under CEQA and are therefore considered cultural resources. Neither residence retains any standing architecture.

Research from records, USGS topographic quadrangle maps, and historic aerial photographs show that the Project Area was used as an orchard until sometime between 1970 and 1984 when the orchard was removed; the property has remained vacant land since. Residences and agricultural outbuildings were present within the southern portions of the proposed Project Area in varying states until 2003, when they gradually disappeared, leaving vacant land.

The remains of the residence within the southwestern portion of the proposed Project Area include a 6-foot-wide L-shaped, concrete walkway that led to a slab foundation with embedded standing pipes. Field surveyors observed a short segment of standing barbed-wire fence leading to a pricky pear tree, a mound containing concrete fragments and rubble, and a second concrete slab (possibly a driveway leading to 6th

street) within the southwestern portion of the Project Area. A row of trees along a historic-era fence line with a length of modern barbed-wire fencing separated the southwestern portion of the proposed Project Area (where the house remnants were located) from the remainder of the Project Area.

The southeastern portion of the Project Area contained an earthen driveway, a metal trough, and a wooden corral. Field surveyors observed additional concrete and brick fragments, as well as several pushpiles and some slight changes in vegetation. The earthen driveway terminates at an earthen mound that was formed during the grading of the perimeter access road, indicating that the construction of the access road cut through the driveway.

These resources have not been evaluated using NRHP and CRHR eligibility criteria, but based on the anticipated age of the structure, these are considered historic structures for being older than 50 years old under CEQA. As mentioned before, these are just the remnants of the residential structures. Any impacts would be less than significant.

Wo	uld 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 Section 15064.5?		\boxtimes		

Less Than Significant with Mitigation Incorporated

As discussed previously, a records search consisting of a review of previous research and literature and historical aerial photographs and maps of the vicinity was conducted for the Project Site. The records search results failed to indicate the presence of previously recorded archaeological or architectural history resources within the Project Area.

While the Feather River is located approximately 2.5 miles east of the Project Area, the underlying geology predates the time of human occupation. Although alluvial deposits tend to preserve archaeological material and create an increased likelihood of pre-contact archaeological sites located along perennial waterways, the alluvial soils within the Project Area (Thompson flat-Oroville) are the result of deposits that are too old to have buried evidence of human occupation. Therefore, soils and hydrology data indicate a low potential for buried pre-contact archaeological sites within the Project Area. Additionally, the root systems of orchard trees are known to be invasive and tend to destroy or displace any cultural material buried in the vicinity. Therefore, the historic-era presence of an orchard within the Project Area would further lower the probability of finding any intact or *in situ* pre-contact cultural remnants buried within the Project Area.

However, there always remains the potential for ground-disturbing activities to expose previously unrecorded archaeological resources. Therefore, Mitigation Measure CUL-1 has been included to reduce the potential impact to archaeological resources to be less than significant with mitigation incorporated.

Wo	uld 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

There are no known burial or dedicated cemetery sites within the Project Area; however, as stated above in b) there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources or human remains; therefore, with implementation of CUL-1, impacts to human remains will remain less than significant.

4.5.3 Mitigation Measures

- CUL-1: Implement Measures to Protect Unanticipated Cultural, Archaeological, and/or Tribal Cultural Resources Discoveries. The following mitigation measure is intended to address the evaluation and treatment of inadvertent/unanticipated discoveries of potential tribal cultural resources (TCRs), archaeological, or cultural resources during a project's ground disturbing activities:
 - If any suspected archaeological or cultural resources are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A professional archaeologist who meets the Secretary of Interior's Standards for Archaeology will make recommendations for further evaluation and treatment, as necessary.
 - If any suspected TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find, or an agreed upon distance based on the project area and nature of the find. A Tribal Representative from a California Native American tribe that is traditionally and culturally affiliated with a geographic area shall be immediately notified and shall determine if the find is a TCR (PRC §21074). The Tribal Representative will make recommendations for further evaluation and treatment, as necessary.
 - When avoidance is infeasible, preservation in place is the preferred option for mitigation of TCRs, or archaeological or cultural resources under CEQA protocols, and every effort shall be made to preserve the resources in place, including through project redesign, if feasible. Culturally appropriate treatment may be, but is not limited to, processing materials for reburial, minimizing handling of cultural objects, leaving objects in place within the landscape, or returning objects to a location within the project area where they will not be subject to future impacts. Permanent curation of TCRs will not take place unless approved in writing by the California

Native American Tribe(s) that is traditionally and culturally affiliated with the project area.

- The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary. Treatment that preserves or restores the cultural character and integrity of a TCR may include Tribal Monitoring, culturally appropriate recovery of cultural objects, and reburial of cultural objects or cultural soil.
- Work at the discovery location cannot resume until all necessary investigation and evaluation of the discovery under the requirements of the CEQA, have been satisfied.
- If the find includes human remains, or remains that are potentially human, he or she shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Butte County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

4.6 Energy

Energy consumption is analyzed according to the potential direct and indirect environmental impacts associated with the construction and operation of the Project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during the construction phase and the use of electricity during normal operations. As the Project is proposing the development of an RV park with associated amenities, the impact analysis focuses on the four sources of energy that are relevant to the proposed Project: electricity, natural gas, the equipment-fuel necessary for Project construction, and the automotive fuel necessary for Project operations.

4.6.1 Environmental Setting

4.6.1.1 Electricity Services

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity, closely followed by renewables, large hydroelectric and nuclear (California Energy Commissions [CEC] 2022). Pacific Gas & Electric (PG&E) provides electricity and natural gas to Butte County. The company has various sources of clean power to offer its customers, stating that in 2022, approximately 95 percent of the customer's electricity comes from GHG-free resources, including renewables, nuclear, and hydroelectric power (PG&E 2023). Furthermore, approximately 40 percent of the electricity that they provided was sourced from renewable resources that qualified under the California Renewables Portfolio Standard (RPS), and the company remains on track to achieve the new RPS mandate from SB 100, which mandates that 60 percent of the state's energy supply portfolio derive from renewable resources by 2030. PG&E also offers a program to customers to purchase up to 100 percent of their electricity from either solar or regional renewable energy sources. The company currently provides 5.5 million customers with electricity and natural gas throughout the state of California.

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

4.6.1.2 Energy Consumption

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

The electricity consumption associated with all uses in Butte County from 2018 to 2022 is shown in Table 4.6-1. As indicated, the demand has decreased since 2018.

Table 4.6-1. Electricity Consumption in Butte County 2018-2022				
Year	Electricity Consumption (kilowatt hours)			
2022	1,444,736,022			
2021	1,527,816,282			
2020	1,369,110,719			
2019	1,387,489,824			
2018	1,467,307,136			

Source: CEC 2023a

The natural gas consumption associated with all uses in Butte County from 2018 to 2022 is shown in Table 4.6-2. As indicated, the demand has increased decreased 2018.

Table 4.6-2. Natural Gas Consumption in Butte County 2018-2022				
Year	Natural Gas Consumption (therms)			
2022	37,135,128			
2021	37,577,092			
2020	36,599,813			
2019	39,225,361			
2018	41,980,106			

Source: CEC 2023a

Total automotive fuel consumption in Butte County from 2019 to 2023 is shown in Table 4.6-3. As shown, automotive consumption has decreased since 2019.

 Table 4.6-3. Automotive Fuel Consumption in Butte County 2019-2023

 Fuel Consumption (gallons)

 2023
 108,806,352

 2022
 109,070,734

 2021
 108,950,254

 2020
 98,167,707

 2019
 112,461,817

Source: CARB 2024

4.6.2 Energy (VI) Environmental Checklist and Discussion

Woi	uld 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 that are relevant to the proposed Project: electricity, natural gas, 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 and natural gas

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

The analysis of electricity and natural gas is based on CalEEMod modeling conducted by ECORP (see Appendix B), which quantifies energy use for Project operations. The amount of operational automotive fuel use was estimated using the CARB's EMFAC2021 computer program, which provides projections for typical daily fuel usage in Butte County (see Appendix F). 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. Energy consumption associated with the proposed Project is summarized in Table 4.6-4 (see Appendix F).

Table 4.6-4. Proposed Project Energy and Fuel Consumption				
Energy Type	Annual Energy Consumed	Percentage Increase Countywide		
Pr	oject Energy Consumption			
Electricity Consumption	518,470 kWh	0.035 percent		
Natural Gas Consumption	7,161 therms	0.019 percent		
ı	Project Fuel Consumption			
Project Construction Year One	28,670 gallons	0.026 percent		
Project Constrainer two	40,591 gallons	0.037 percent		
Project Operations	131,400 gallons	0.012 percent		

Source: Refer to Appendix B for building energy consumption calculations and Appendix F for Fuel Consumption calculations.

Notes: The Project increases in electricity and natural gas consumption are compared with all of uses in Butte County in 2022, the latest data available. The Project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2023, the most recent full year of data.

As shown in Table 4.6-4, the annual electricity consumption due to operations would be 518,470 kilowatthours, resulting in an increase of 0.035 percent in the typical annual electricity consumption attributable to all uses in Butte County. This is potentially a conservative estimate since in September 2018 Governor Jerry Brown Signed Executive Order (EO) B-55-18, which established a new statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Carbon neutrality refers to achieving a net-zero carbon dioxide emissions. This can be achieved by reducing or eliminating carbon emissions, balancing carbon emissions with carbon removal, or a combination of the two. This goal is in addition to existing statewide targets for greenhouse gas (GHG) emission reduction. Governor's Executive Order B-55-18 requires CARB to "work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." Natural gas consumption due to operations would be 7,161 therms resulting in a negligible increase (0.019) percent) in the typical annual natural gas consumption attributable to all uses

in Butte County. For these reasons, the Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

Fuel necessary for Project construction would be required for the operation and maintenance of construction equipment and the transportation of materials to the Project Site. The fuel expenditure necessary to construct the physical building and infrastructure would be temporary, lasting only as long as Project construction. As further indicated in Table 4.6-4, the Project's gasoline fuel consumption during the one-time construction period is estimated to be 28,670 gallons during the first year of construction and 40,591 gallons during the second year of construction. This would increase the annual fuel use in the County by 0.026 percent and 0.037 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 judiciously use fuel supplies to minimize costs due to waste and subsequently maximize profits. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and requiring recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. 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.

The Project is estimated to generate approximately 360 daily trips (Headway Transportation 2024). As indicated in Table 4.6-4, this would result in the consumption of approximately 131,400 gallons of automotive fuel per year, which would increase the annual countywide automotive fuel consumption by 0.012 percent. Fuel consumption associated with the vehicle trips generated by the Project during operations would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region.

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

Wou	uld 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?			\boxtimes	

Less Than Significant Impact

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report (IEPR) that assesses major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code Section 25301a). Each biennial IEPR takes into account various factors such as energy supply, demand, infrastructure,

environmental considerations, and economic impacts. The report aims to address key energy challenges and provide recommendations to achieve a reliable, affordable, and sustainable energy system for California (CEC 2023b).

Some of the key areas typically covered in the report include:

- Renewable Energy: The IEPR focuses on promoting renewable energy sources such as solar, wind, geothermal, and biomass. It assesses the state's progress in meeting its renewable energy goals, identifies barriers, and proposes strategies to increase renewable energy generation and integration into the grid.
- 2. Energy Efficiency: The report highlights the importance of energy efficiency measures to reduce energy consumption and greenhouse gas (GHG) emissions. It explores policies and initiatives to promote energy-efficient technologies and practices in buildings, transportation, and industries.
- 3. Grid Modernization: The IEPR addresses the modernization and optimization of the electrical grid infrastructure to accommodate a higher penetration of renewable energy, improve grid reliability, and support emerging technologies such as energy storage and electric vehicles.
- 4. Transportation: The report typically includes a section on transportation, focusing on reducing dependence on fossil fuels and promoting the adoption of electric vehicles and alternative fuels. It may discuss infrastructure development, incentives, and policies to accelerate the transition to cleaner transportation options.
- 5. Climate Change Mitigation: Given California's commitment to combating climate change, the IEPR often emphasizes strategies to reduce GHG emissions and achieve the state's climate goals. This may include discussions on carbon pricing, cap-and-trade programs, and the integration of climate considerations into energy planning.
- 6. Energy Resilience: The report may address strategies to enhance the resilience of the energy system, considering factors such as extreme weather events, natural disasters, and cybersecurity risks. It could discuss measures to ensure a reliable and uninterrupted supply of energy during emergencies.
- 7. Economic Impacts and Equity: The IEPR often explores the economic implications of energy policies and initiatives, including job creation, investment opportunities, and the equitable distribution of benefits across different communities and socioeconomic groups.

The CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the IEPR.

The 2023 IEPR focuses on next steps for transforming transportation energy use in California. The 2023 IEPR addresses the role of transportation in meeting state climate, air quality, and energy goals; the transportation fuel supply; the Alternative and Renewable Fuel and Vehicle Technology Program; current and potential funding mechanisms to advance transportation policy; transportation energy demand forecasts; the status of statewide plug-in electric vehicle infrastructure; challenges and opportunities for electric vehicle infrastructure (CEC 2023c).

The IEPR provides policy recommendations to be implemented by energy providers in California. Electricity would be provided to the Project by PG&E. PG&E's Energy Efficiency 2024-2031 Strategic Business Plan builds on existing State programs and policies that support the IEPR goals of improving electricity, natural gas, and transportation fuel energy use in California. PG&E's Energy Efficiency Plan supports the State's goals of zero-carbon electricity and economy-wide carbon neutrality and moving towards a climate-resilient economy. PG&E's Energy Efficiency portfolio can address climate change by both delivering solutions that help to decarbonize customer's homes and buildings and by supporting the use of clean and renewable energy resources powering our electric system (PG&E 2022). Thus, because PG&E is consistent with the 2023 IEPR and the Project would procure its energy from PG&E, the Project is consistent with, and would not otherwise interfere with or obstruct implementation of the goals presented in the 2023 IEPR.

Additionally, the Project would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. The Project will be built to the Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations (CCR) (Title 24). Title 24 was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately every three years; the 2019 Title 24 updates went into effect on January 1, 2020. The 2022 standards went into effect became effective January 1, 2023. The 2022 Energy Standards improve upon the 2019 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2022 update to the Energy Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings, encouraging better energy efficiency, strengthening ventilation standards, and more. The 2022 Energy Standards are a major step toward meeting Zero Net Energy. Buildings permitted on or after January 1, 2023, must comply with the 2022 Standards. Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments. Additionally, in January 2010, the State of California adopted the California Green Building Standards Code (CalGreen) that establishes mandatory green building standards for all buildings in California. The code was subsequently updated in 2013. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality.

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.

4.7.1 Environmental Setting

4.7.1.1 Geomorphic Setting

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

4.7.1.2 Regional Seismicity and Fault Zones

Classifying and Identifying Faults

In California, special definitions for active faults were devised to implement the Alquist-Priolo Earthquake Fault Zoning Act of 1972, which regulates development and construction in order to avoid the hazard of surface fault rupture. The State Mining and Geology Board established policies and criteria in accordance with the act. The board defined an active fault as one which has had surface displacement within Holocene time (about the last 11,000 years). A potentially active fault was considered to be any fault that showed evidence of surface displacement during Quaternary time (the last 1.6 million years). Because of the large number of potentially active faults in California, the State Geologist adopted additional definitions and criteria in an effort to limit zoning to only those faults with a relatively high potential for surface rupture. Thus, the term *sufficiently active* was defined as a fault for which there was evidence of Holocene surface displacement. This term was used in conjunction with the term *well-defined*, which relates to the ability to locate a Holocene fault as a surface or near-surface feature (DOC 2024c).

According to the 2030 General Plan, while less seismically active than some areas of the state, Oroville is subject to hazards associated with earthquake fault activity. One known active fault is found within the General Plan Planning Area; other active faults outside the Planning Area but in the region have the potential to affect the City of Oroville.

Figure SAF-1 of the 2030 General Plan identifies that the Cleveland Hills Fault (though identified as the Bangor Fault in the latest DOC California Earthquake Hazards Zone Application (DOC 2024c) is about 6 miles southeast of Oroville. This fault is classified as an Alquist-Priolo Special Studies Zone, to which special development regulations apply. Seismic activity associated with the Cleveland Hills Fault resulted in a 5.7 magnitude earthquake in August 1975; studies estimate a maximum credible earthquake of 6.5 to 6.7 on the Richter Scale could occur on this fault in the future.

Other mapped, active faults in the wider region, outside of Butte County, have the potential to generate seismic activity that could be felt in Oroville. These include:

The Midland-Schweitzer Fault, an approximately 80-mile-long fault found about 60 miles southwest of Oroville.

The northern section of the 350-mile-long San Andreas Fault, located about 115 miles west of Oroville.

The Hayward-Calaveras Fault complex in the San Francisco Bay Area, located approximately 120 miles southwest of Oroville.

The Russell Fault, located about 70 miles east of Oroville, was associated with a major earthquake of up to magnitude 6.5 in 1966.

The Last Chance-Honey Lake Fault, located along the California-Nevada border to the east of Oroville.

The Willows fault is located about 30 miles west of the Oroville, and the Coast Ranges thrust zone is located about 60 miles west of the City.

In addition to mapped known faults, there are a large number of other faults within Butte County and in neighboring areas that could be considered potentially active, based on criteria developed by the California Department of Mines and Geology (City of Oroville 2015a).

Within Butte County, faults considered by some geologists to be potentially active include the Big Bend fault, thought to be capable of generating an earthquake of up to magnitude 7.0 in Butte County; the Foothill shear zone, which extends into southern Butte County, and the Chico monocline fault, which could produce an earthquake of up to magnitude 7.0, having the most significant impacts in the Chico area but which could also severely affect other parts of the County, including Oroville (City of Oroville 2015a).

There are a number of potentially active faults outside of Butte County; those with the greatest potential to cause damage within Butte County include the Coast Ranges thrust zone, to the west and the Willows fault. There may also be seismic risk presented by the numerous faults present in the Sierra Foothills to the east and southeast, but their status is uncertain and subject to debate among geologists (City of Oroville 2015a).

Liquefaction

Liquefaction is the sudden temporary loss of shear strength in saturated, loose to medium-dense, granular sediments to ground shaking. Liquefaction generally occurs when seismically induced ground shaking causes soil pore water pressure to increase to a point equal to the overburden pressure.

Liquefaction causes foundation failure of buildings and other structures due to the reduction of foundation bearing strength. The potential for liquefaction depends on the duration and intensity of earthquake shaking, particle size distribution of the soil, density of the soil, and elevation of the groundwater. Areas at risk due to the effects of liquefaction are typically those with a high groundwater table and underlying loose to medium-dense, granular sediments, particularly younger alluvium, and

artificial fill. According to the City of Oroville 2030 General Plan, the Project Site is in an area identified as low susceptibility to liquefaction. (City of Oroville 2015a).

Landslides

Ground failure including landslides is dependent on slope and geology as well as the amount of rainfall, excavation, or seismic activities. A landslide is a mass of rock, soil, and debris displaced down a slope by sliding, flowing, or falling. Steep slope sand downslope creep of surface materials characterize landslide-susceptible areas. Debris flows consist of a loose mass of rocks and other granular material that, if present on a steep slope and saturated, can move down slope. The rate of rock and soil movements can vary from a slow creep over many years to sudden mass movements.

Landslides occur throughout the State of California, but the density of incidents increases in zones of active faulting. The Project site was not in an area identified by the City of Oroville's 2030 General Plan as being susceptible to landslides.

Expansive Soils

Soil mapping is used to help identify potential geotechnical concerns, such as erosion and expansion that are more common with certain soils types. Expansive soils contain higher levels of clay and present problems for development since these soils expand and shrink depending on water content. The shrinking and swelling of soils can damage structures that were not appropriately engineered. Expansion potential is related to factors including the amount of moisture present and the proportion and percentage and type of clay minerals present in the soil. Sands and silts with low amount of clay minerals have a low expansion potential. Different soil types can be classified based on their expansive properties. These properties are described below:

Low Potential for Expansion: The soils class includes sands and silts with relatively low amounts of clay minerals. Sandy clays may also have low expansion potential.

Moderate Potential for Expansion: This class includes silty clays and clay textured soils, heavy silts, light sandy clays, and silty clays with mixed clay minerals. These types of soils are not found in the City of Oroville, but have been included for informational purposes.

High Potential for Expansion: This class includes clays that expand and contract more than the types of soils described above.

The Project Site is located within an area with High Potential for Expansion according to the City of Oroville's 2030 General Plan.

4.7.1.3 Soils

According to the Web Soil Survey (NRCS 2024), one soil unit, or type, has been mapped within the Study Area: 318- Thompson flat-Oroville, 0 to 9 percent slopes.

Thompson flat-Oroville, 0 to 9 percent slopes soil unit is comprised of approximately 50 percent Thompson flat, fine sandy loam and approximately 40 percent Oroville, gravely fine sandy loam. The remaining 10 percent is composed of the minor components Fernandez, sandy loam; Unnamed, loamy, duripan 10 to 20 inches; and, Unnamed, fine-loamy, bedrock densic 40 to 60 inches. Thompson flat, fine sandy loam and minor components Fernandez, sandy loam and Unnamed fine-loamy, bedrock densic 40 to 60 inches are not considered hydric. Oroville, gravely fine sandy loam and minor component Unnamed, loamy, duripan 10 to 20 inches are considered hydric (NRCS 2023).

4.7.1.4 Paleontological Resources

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both fossilized remains of ancient plants and animals and the traces thereof) e.g., trackways, imprints, burrows, etc.). Paleontological resources occur within bedrock geologic deposits that may or may not underly the soil layer and are almost exclusively preserved in sedimentary rocks; however, in rare cases, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions. The Society of Vertebrate Paleontology (SVP) has defined fossils as being remains or traces of plants and animals that are greater than 5,000 years old (i.e., older than middle Holocene in age).

A paleontological record search conducted by the Sierra College Natural History Museum in January 2024. None of the specimen localities listed resources within the Project Area. There were some marine invertebrate fossils (gastropods, horned corals, crinoids, and bryozoans) from the Permian Calaveras Formation that did not have a location specified but were located in Oroville. There was no GPS coordinates or Township and Range information associated with these fossils, but the record stated "Oroville, Highway 70" and "State Recreation Area".

4.7.2 Geology and Soils (VII) Environmental Checklist and Discussion

Wo	uld 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 dea involving:				
	 Rupture of a known earthquake fault, as delineated on the most recent Alquist-Price 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. 	e \Box		\boxtimes	
	ii) Strong seismic ground shaking?			\boxtimes	
	iii) Seismic-related ground failure, including liquefaction?			\boxtimes	
	iv) Landslides?			\boxtimes	

The proposed Project Site is not located within an Alquist-Priolo Earthquake Zone (CGS 2016). The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards. No active or potentially active faults are known to pass directly beneath the Site. By CGS definition, an active fault is one with surface displacement within the last 11,000 years. A potentially active fault has demonstrated evidence of surface displacement with the past 1.6 million years. Faults that have not moved in the last 1.6 million years are typically considered inactive.

The 2030 General Plan includes policies that address the potential for geological hazards within the General Plan Planning Area. Policies applicable to the proposed development are as follows:

- P1.2 Require all new developments to be subjected to a geotechnical study prior to development approval and to mitigate any identified hazards to a level of insignificance. If mitigation is not possible, do not approve the development.
- P1.4 Ensure that new development incorporates design and engineering that minimizes the risk of damage from seismic events and landsliding, consistent with state Building Codes and Historic Building Codes.

The Project Site is not located within an Alquist-Priolo Earthquake Zone. In addition, compliance with General Plan policies shown above would assure that any new construction would incorporate the construction standards necessary for the protection of people and structures from seismic events. There would be a less than significant impact.

ii) According to CGS's Earthquake Shaking Potential for California mapping, the proposed Project Site is located in an area that will experience lower levels of ground-shaking less frequently. In most earthquakes, only weaker masonry buildings would be damaged. However, very infrequent earthquakes could still cause strong shaking in the area (CGS 2016). The proposed Project includes the development of an RV park with additional amenities associated with the park. The Project would be required to comply with the City of Oroville Improvement Standards, including any required seismic mitigation standards. Because of the required compliance and the distance from active faults, the proposed Project would have a less than significant impact related to strong ground shaking.

All future construction on the Project would be required to comply with the engineering standards associated with the California Building Code (CBC). The City reviews all design elements of the Project for conformance with CBC parameters, as part of the permit review process. These standards are in place to reduce damage associated with ground-shaking as a result of potential earthquakes. Because of the required compliance with the CBC seismic mitigation standards, the proposed Project would have a less than significant impact related to strong ground shaking.

- iii) Liquefaction occurs when loose sand and silt saturated with water behaves like a liquid when shaken by an earthquake. Liquefaction can result in the following types of seismic-related ground failure:
 - Loss of bearing strength soils liquefy and lose the ability to support structures.
 - Lateral spreading soils slide down gentle slopes or toward stream banks.
 - Flow failures soils move down steep slopes with large displacement.
 - Ground oscillation surface soils, riding on a buried liquefied layer, are thrown back and forth by shaking.
 - Flotation floating of light buried structures to the surface.
 - Settlement settling of ground surface as soils reconsolidate.
 - Subsidence compaction of soil and sediment.

Liquefaction potential has been found to be greatest where the groundwater level and loose sands occur within a depth of about 50 feet or less. According to Figure SAF-1 of the 2030 General Plan, the Project Site is located in an area identified for a low risk of liquefaction (City of Oroville 2015a). Finally, because of the required compliance with the CBC seismic mitigation standards and General Plan Policies P1.2 and P1.4, the proposed Project would have a less than significant impact related to liquification.

iv) Steep slopes, in conjunction with certain soil types, can be prone to soil erosion and landslides. Landslides occur as a result of topographical and soil conditions, where loose soils move down steep slopes. Some of the natural causes of this instability are earthquakes, weak soils, erosion, and heavy rainfall. Human activities such as poor grading that undercuts steep slopes or overloads them with fill, excessive irrigation, and removal of vegetation can also contribute to ground failure.

Earthquakes can also induce landslides by initiating strong ground motion. 2030 General Plan Figure SAF-1 indicates several areas of steep slopes (greater than 30 percent), and hills prone to landslides are found within the Oroville Planning Area. These are primarily concentrated on hillsides and bluffs in the northern part of the Planning Area. However, while the Project is located in an area of relatively small hills, the Project Site is not located within an area identified in Figure SAF-1 as having a potential for landslides. Finally, compliance with General Plan Policy P1.4 would ensure that the Project would have a less than significant impact for the potential for landslides.

Wo	uld 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?			\boxtimes	

As discussed above in Section 4.7.1, the Project Site's soils have a slight erosion potential. The proposed Project includes the construction of new structures, with construction involving grading, excavation, and soil hauling, which would disturb soils and potentially expose them to wind and water erosion. However, the 2030 General Plan policies that address erosion, including General Plan Policy P1.2, which requires new development to be subjected to a geotechnical study prior to development approval and to mitigate any identified hazards to a level of insignificance. Additionally, all development occurring as a result of the proposed Project must comply with the CBC, which contains specific regulations for erosion control.

Any development involving clearing, grading, or excavation that causes soil disturbance of one or more acres, or any project involving less than 1 acre that is part of a larger development plan and includes clearing, grading, or excavation, is subject to National Pollutant Discharge Elimination System (NPDES) State General Permit (Order No. 2009-0009-DWQ) provisions. Any development of this size in the City of Oroville, including the Project Site, would be required to prepare and comply with an approved Stormwater Pollution Prevention Plan (SWPPP) that provides a schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. The SWPPP would consider the full range of erosion control BMPs including any additional site-specific and seasonal conditions. Erosion control BMPs include, but are not limited to, the application of straw mulch, hydroseeding, the use of geotextiles, plastic covers, silt fences, and erosion control blankets, as well as construction site entrance/outlet tire washing. The State General Permit also requires that those implementing SWPPPs meet prerequisite qualifications that would demonstrate the skills, knowledge, and experience necessary to implement SWPPPs. NPDES requirements would significantly reduce the potential for substantial erosion or topsoil loss to occur in association with new development. In addition, the proposed Project would be required to use BMPs to control runoff from all new development and thus limit erosion.

Since erosion impacts are often dependent on the type of development, intensity of development, and amount of lot coverage of a particular Project Site, impacts can vary. However, compliance with NPDES and SWPPP requirements, as well as implementation of the General Plan Policies P1.2 and the CBC, would ensure that soil erosion and related impacts would be less than significant.

Wo	uld the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?			\boxtimes	

As discussed previously, the Project Site has little potential for landslides.

Lateral spreading is a form of horizontal displacement of soil toward an open channel or other *free* face, such as an excavation boundary. Lateral spreading can result from either the slump of low cohesion and unconsolidated material or, more commonly, by liquefaction of either the soil layer or a subsurface layer underlying soil material on a slope, resulting in gravitationally driven movement. As discussed in Item a) iii) above, the Project Site is in an area identified as having a low probability of liquefaction. Construction as proposed by the Project would be required to comply with the CBC and General Plan Policy P1.2, which require new developments to prepare a geotechnical site investigation prior to construction. As such, the potential for impacts due to lateral spreading would be less than significant.

With the withdrawal of fluids, the pore spaces within the soils decrease, leading to a volumetric reduction. If that reduction is significant enough over an appropriately thick sequence of sediments, regional ground subsidence can occur. This typically only occurs within poorly lithified sediments and not within competent rock. This can occur as a result of high-volume water, oil, or gas extraction operations. No oil, gas, or high-volume water extraction wells are known to be present in the Project vicinity. According to the U.S. Geological Survey (USGS) Areas of Land Subsidence in California webpage, the City of Oroville, including the Project Site, is not located in an area of land subsidence (USGS 2024a). As such, the potential for impacts due to subsidence would be less than significant.

Collapse occurs when water is introduced to poorly cemented soils, resulting in the dissolution of the soil cementation and the volumetric collapse of the soil. In most cases, the soils are cemented with weak clay (argillic) sediments or soluble precipitates. This phenomenon generally occurs in granular sediments situated within arid environments. Collapsible soils will settle without any additional applied pressure when sufficient water becomes available to the soil. Water weakens or destroys bonding material between particles that can severely reduce the bearing capacity of the original soil. The collapse potential of the Project Site soil must be determined for consideration in the foundation design.

Because of the required compliance with General Plan Policy P1.2, the CBC Code seismic mitigation standards and the distance from active faults the potential for that settlement/collapse at the site is considered unlikely. As such, the potential for impacts due to collapse would be less than significant.

Wo	uld the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				

Expansive soils are types of soil that shrink or swell as the moisture content decreases or increases. Structures built on these soils may experience shifting, cracking, and breaking damage as soils shrink and subside or expand. According to General Plan Figure SAF-2, the Project Site is located in an area having a high potential for expansion. However, despite the shrink-swell potential identified for Project Site soils, standard procedures used in the construction of concrete footings as required by the CBC, and adherence General Plan Policy P1.2 requiring a site-specific geotechnical report, will reduce this potential impact.

Soils reports must evaluate the shrink-swell potential of sites and recommend measures to minimize such hazards through recommended geotechnical special provisions. Such geotechnical special provisions would address any site-specific expansive soil hazards for development under the proposed Project. As such, the potential for the proposed Project to be affected by expansive soils is less than significant.

Wo	uld the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?			\boxtimes	

Less Than Significant Impact

The Project Site is located within the Thermalito Water and Sewage District service area. General Plan Policy P7.3 requires all development in areas that are currently served or could be feasibly served by sewers to be connected to a sewer conveying wastewater to the Sewerage Commission – Oroville Region's (SC-OR) treatment plant. Policy P7.4 requires that approval of new urban development shall be conditioned on the availability of adequate long-term capacity for wastewater conveyance, treatment and disposal sufficient to service the proposed development. Therefore, any impacts would be less than significant associated with Project Site soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

Wo	uld 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?		\boxtimes		

Less Than Significant with Mitigation Incorporated

A paleontological record search was conducted by the Sierra College Natural History Museum. There were no paleontological records found for the Project Site, however, there were some marine invertebrate fossils (gastropods, horned corals, crinoids, and bryozoans) from the Permian Calaveras Formation that did not have a location specified but were located in Oroville. There was no GPS coordinates or Township and Range information associated with these fossils, but the record was "Oroville, Highway 70" and "State Recreation Area". Therefore, to mitigate for any potential impacts to paleontological resources, the proposed Project would incorporate Mitigation Measure PALEO-1. With implementation of Mitigation Measure PALEO-1, it would reduce potential impacts to a less than significant impact.

4.7.3 Mitigation Measures

Mitigation Measure PALEO-1: Discovery of Unknown 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 the City 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. If the City resumes work in a location where paleontological remains have been discovered and cleared, the City will have a paleontologist onsite to confirm that no additional paleontological resources are in the area.

4.8 Greenhouse Gas Emissions

4.8.1 Environmental Setting

GHG emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as 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 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 California Code of Regulations [CCR] 15064.4(b)). A lead agency may use a "model or methodology" to estimate GHG emissions and has the discretion to select the model or methodology it considers "most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change." (14 CCR 15064.4(c)). Section 15064.4(b) provides that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment:

- 1. The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
- 2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- 3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

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

Per CEQA Guidelines § 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public

agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions." Put another way, CEQA Guidelines § 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The BCAQMD, the regional air pollution control officer for the basin, has not adopted a GHG significance threshold Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). Thus, in the absence of any GHG emissions significance thresholds the projected emissions are compared to the GHG thresholds recommended by issued by the California Air Pollution Control Officers Association (CAPCOA), which is an association of 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 is considered by CAPCOA to be low enough to capture a substantial fraction of future projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. The 900 metric tons of CO₂e 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 CO2e per year level would fall within the percentage of largest projects that are worth mitigating without wasting scarce financial, governmental, physical and social resources.

Additionally, the Project will be assessed for consistency with regulations or requirements adopted by the Butte County Association of Governments (BCAG's) 2020 Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which establishes an overall GHG target for the Project region. The 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The BCAG region strives toward sustainability through integrated land use and transportation planning. The BCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 7 percent per capita reduction by the end of 2035.

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

Where GHG emission quantification was required, emissions were modeled using CalEEMod version 2022.1. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction generated GHG emissions were calculated using CalEEMod model defaults for Butte County. Operational GHG emissions were based on the site dimensions and emission sources identified on the Project Site plan and operational trip generation rates provided by Headway Transportation (2024). Refer to Appendix B for all CalEEMod output files.

Construction Greenhouse Gas Emissions

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

Table 4.8-1. Construction-Related Greenhouse Gas Emissions				
Emission Source CO₂e (Metric Tons/Year)				
Construction – Calendar Year One	291			
Construction – Calendar Year Two	412			
CAPCOA Significance Threshold	900			
Exceed CAPCOA Significance Threshold?	No			

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

Notes: Building construction, paving and painting assumed to occur simultaneously.

As shown in Table 4.8-1, Project construction would result in the generation of approximately 291 metric tons of CO₂e during the first calendar year of construction and 412 metric tons during the second calendar year of construction. This would be less than the CAPCOA GHG significance threshold. Also, once construction is complete, the generation of these GHG emissions would cease. This impact is less than significant.

Operational Greenhouse Gas Emissions

Operation of the Project would result in an increase in GHG emissions primarily associated with motor vehicle trips. Long-term operational GHG emissions attributed to the Project are identified in Table 4.8-2.

Table 4.8-2. Operational-Related Greenhouse Gas Emissions			
Emission Source	CO₂e (Metric Tons/Year)		
Mobile	552		
Area	0		
Energy	87		
Water	3		
Waste	26		
Refrigerants	0		
Total	668		
CAPCOA Significance Threshold	900		
Exceed CAPCOA Significance Threshold?	No		

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

Notes: Emission projections are predominantly based on CalEEMod model defaults for Butte County as well as trip generation rates provided by Headway Transportation (2024).

As shown in Table 4.8-2, Project operations would result in the generation of approximately 668 metric tons of CO_2e per year. This would be less than the CAPCOA GHG significance threshold. This impact is less than significant.

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

No impact

The State of California promulgates several mandates and goals to reduce statewide GHG emissions, including the goal to reduce statewide GHG emissions to 40 percent below 1990 levels by the year 2030 (SB 32) and 80 percent below 1990 levels by the year 2050 (EO S-3-05). The proposed Project is subject to compliance with SB 32. As previously described, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 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. Specifically, the Project will be

assessed for consistency with the BCAG's 2020 RTP/SCS, which establishes an overall GHG target for the Project region consistent with California's 2030 GHG reduction goals of SB 32 and EO S-3-05. The 2020 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The BCAG region strives toward sustainability through integrated land use and transportation planning. The BCAG region must achieve specific federal air quality standards and is required by state law to lower regional GHG emissions. Specifically, the region has been tasked by CARB to achieve a 7 percent per capita reduction by the end of 2035.

The strategy to achieve the mandated 7 percent per capita reduction in mobile-source GHG emissions by 2035 promulgated by the BCAG 2020 RTP/SCS is based on a land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region. The assumptions surrounding the assumed pattern of future growth are guided by BCAG's population growth projections for Butte County and cities.

The projected regional population growth in the BCAG 2020 RTP/SCS, when integrated with the proposed regional transportation network identified in the RTP/SCS, would reduce per capita vehicular travel—related GHG emissions and achieve state-mandated GHG reduction per capita targets for the BCAG region. The 2020 RTP/SCS is based on a land use and transportation scenario which defines a pattern of future growth for the region. BCAG has prepared the Butte County population and housing forecasts using professionally accepted methodologies for long-range forecasting. Utilizing a "top down" approach, long-term projections prepared by the California Department of Finance were consulted for Butte County and used by BCAG to re-establish control totals for the region. Additionally, a variety of data sources, including input from local jurisdictions, were reviewed and inserted at the local jurisdiction level, therefore incorporating a "bottom up" approach. Adjustments were made to compensate for the re-distribution and re-population of the Camp Fire burn area (BCAG 2018). As such, projects that propose development consistent with the growth anticipated by BCAG would be consistent with the 2020 RTP/SCS.

According to the California Department of Finance, the City of Oroville currently contains a population of 18,863 people (Department of Finance 2022). Accounting for a home vacancy rate of 7.1 percent in Oroville, the Department of Finance (2022) estimates an average of 2.49 people living within an occupied residence. The Project is proposing an RV Park with associated amenities that would accommodate long-term and short-term guests. The long-term guests could be expected to accommodate up to twenty-two sites along the western perimeter (2.49 x 22 = 54.78), thereby increasing the City of Oroville population to 18,917. This estimate conservatively assumes that all future residents at the Project would be new to Oroville. Additionally, it is noted that RV's do not usually accommodate as many people as traditional housing. BCAG projects the population of Oroville to range from 20,757 to 22,283 people in the year 2025. Thus, the expected growth in population and housing as a result of the proposed Project would not surpass BCAG's projections and therefore would not result in a conflict with the 2020 RTP/SCS. There would be no impact.

4.8.3 Mitigation Measures

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

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

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

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

A hazardous material is defined in 22 CCR Section 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 several 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 or 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.

Most hazardous materials regulation and enforcement in Butte County is managed by the Environmental Health Division of the Butte County Department of Resource Management. Environmental Health is charged with the responsibility of enforcement of pertinent California health laws, rules, regulations, and is responsible for responding to incidents involving any release or threatened release of hazardous materials. Environmental Health programs and services strive to prevent human injury and illness and promote well-being by identifying and evaluating environmental sources and hazardous agents; and limiting exposures to hazardous physical, chemical, and biological agents in air, soil, food, and other environmental media or settings that may be adversely affect human health. Environmental Health is also responsible for requiring all business that use hazardous materials to comply with the State-required hazardous materials business plan submittal and registration with the California Environmental Reporting System.

Under Government Code Section 65962.5, both the Department Toxic Substance Control (DTSC) and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. The proposed Project Sites are not listed by the DTSC as a hazardous substances site on the list of hazardous waste sites compiled pursuant to Government Code Section 65962.5 (Cortese List), however, on the adjacent parcel at Hearthstone School, there was a site had potential contaminants of lead and organochlorine pesticides. This has been documented as no action required as of March 24, 2008 (DTSC 2024). The proposed Project is not listed on the SWRCB Geotracker website but is within a half mile of eight Leaking Underground Storage Tank (LUST) Cleanup sites. The sites and their statuses can be found in Table 4.9.1:

Table 4.9.1. SWRCB GeoTracker LUST Cleanup Sites within 0.5 Miles of the Project Site						
Location	Address	Potential Contaminants of Concern	Status	Date		
Butte County Public Works Yard, Case 1	7 County Center Drive Oroville, CA 95965	Solvents	Case Closed	12/11/1993		
Butte County Public Works Yard, Case 2	7 County Center Drive Oroville, CA 95965	Gasoline	Case Closed	12/13/1993		
Butte County Public Works Oroville Yard	9 County Center Drive Oroville, CA 95965	Diesel, Gasoline	Case Closed	10/10/2008		
California Highway Patrol	2072 Third Street Oroville, CA 95965	Gasoline	Case Closed	3/1/2006		
CDF Oroville Fire Station	176 Nelson Avenue Oroville, CA 95965	Gasoline	Case Closed	11/18/2003		
Chevron Oroville	2030 3 rd Street Oroville, CA 95966	Gasoline	Case Closed	8/12/1987		
Oroville Public Works Yard Case 2	9 County Center Drive Oroville, CA 95965	Gasoline	Case Closed	10/10/2008		
Unocal SS #8254	2006 4 th Street Oroville, CA 95966	Gasoline	Case Closed	10/29/1992		

Source: SWRCB. 2024. GeoTracker.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0600700017

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

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

The proposed Project includes the construction of an RV park and associated amenities, with the potential for construction-related hazards that could be created during the course of construction in the Project Site. The Project Site does not contain any existing structures for demolition, and therefore would not pose a hazard regarding asbestos- and/or lead-containing materials that would trigger a hazardous building materials analysis. Construction may include the use of hazardous materials, given that construction activities involve the use of heavy equipment, which uses small and incidental amounts of oils and fuels and other potentially flammable substances. The level of risk associated with the accidental release of hazardous substances is not considered significant due to the small volume of low concentration of hazardous materials used during construction. The construction contractor would be required to use standard construction controls and safety procedures that would avoid and minimize the potential for accidental release of such substances into the environment. Standard construction practices would be observed such that any materials released are appropriately contained and remediated as required by local, state, and federal law.

Regulatory requirements for the transport of hazardous wastes in California are specified in Title 22 of the CCR, Division 4.5, Chapters 13 and 29. In accordance with these regulations, transport of hazardous materials must comply with the California Vehicle Code, California Highway Patrol regulations (contained in Title 13 of the CCR); the California State Fire Marshal regulations (contained in Title 19 of the CCR); U.S. Department of Transportation regulations (Title 49 of the Code of Federal Regulations [CFR]); and USEPA regulations (contained in Title 40 of the CFR). The use of hazardous materials is regulated by the DTSC (Title 22, Division 4.5 of the CCR). Therefore, potential impacts for creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials from implementation of the proposed Project would be less than significant.

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

As discussed in Issue a), the proposed Project proposes an RV park with associated amenities. The proposed Project is not anticipated to include routine transport, use, or disposal of hazardous materials and do not present a reasonably foreseeable release of hazardous materials. However, in the case of reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment, any use of large amounts of hazardous materials would require them to be utilized, stored, and transported pursuant to state and federal safety regulations. Therefore, the proposed Project would have a less than significant impact and no mitigation is required.

Wo	uld 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?			\boxtimes	

Less than Significant Impact

The proposed Project is within one-quarter mile of Hearthstone School, as it is on the adjacent parcel. The use of hazardous materials would be limited during construction activities and would include traditional materials typically associated with construction projects such as gasoline, diesel, oil, paint, resin and epoxy concrete. All hazardous materials, substances, or waste would be handled consistent with federal, state, and local regulations. Any impacts would be less than significant.

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

No Impact

Under Government Code Section 65962.5, both DTSC and the SWRCB are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. A search of the of the DTSC and SWRCB lists identified that the proposed Project Site is not located on a hazardous material site. However, the DTSC showed that the adjacent parcel at Hearthstone School, there was a site that had potential contaminants of lead and organochlorine pesticides. This has been documented as no action required as of March 24, 2008. Additionally, as shown in Table 4.9.1, the SWRCB search showed that there were eight LUST cleanup sites within the project vicinity, but all had been remediated and their cases had been closed. Given that there are no existing

hazardous waste sites within the Project Site area, the proposed Project will have no impact in this area and no mitigation is required.

Wo	uld 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?				\boxtimes

No Impact

The proposed Project is not within any airport land use compatibility plan or within two miles of a public airport. The nearest airport is Oroville Municipal Airport, which is located 2.5 miles southwest of Project Site (Butte County 2017). Therefore, no safety hazards to people residing or working in the Project Area would result due to the proximity to a public or public use airport. 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?			\boxtimes	

Less Than Significant Impact

All communities face the possibility of disasters and emergency situations, whether they are of natural or human-related causes. Citizens and first responders must be prepared to react to such an emergency. The City of Oroville has adopted an Emergency Operations Plan, which addresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents and national security emergencies in or affecting the City of Oroville (City of Oroville, 2017). The Butte County Office of Emergency Services is charged with emergency management for the County, including City of Oroville, and is responsible for maintaining situational awareness of threats that may necessitate an evacuation of citizens. The Butte County Emergency Operations Plan addresses the County planned response to extraordinary emergency situations associated with natural disasters, technology incidents and national security emergencies in or affecting the Butte County Operational Area, which includes the unincorporated area of the County of Butte and the incorporated areas of the cities of Chico, Oroville, Gridley, Biggs, and the Town of Paradise (Butte County 2022). The City of Oroville Fire Department and Police Department are equipped to provide a first line of emergency response in the unlikely event of a major disaster.

The proposed Project is located adjacent to Nelson Avenue, which could be utilized during an emergency evacuation. However, the Project does not include any actions that would impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. No construction activities would impede the use of surrounding roadways in an emergency evacuation. The proposed Project involves the construction and operation of an RV park with associated amenities and would not interfere with any emergency response or evacuation plans. Implementation of the proposed Project would result in a less than significant impact and no mitigation is required.

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?			\boxtimes	

Less Than Significant Impact

The proposed Project is located within the City of Oroville, which has an elevated risk of wildfires; Section 4.20 provides further discussion. According to the California Department of Forestry and Fire Protection (CalFire), the Project site is located within a moderate fire hazard severity zone (FHSZ) and is within a Local Responsibility Area (LRA) (CalFire 2007).

To address Hazard Mitigation in Butte County, Butte County partnered with five incorporated communities and many special districts to update their 2019 Local Hazard Mitigation Plan (LHMP). The City of Oroville has their own LHMP as part of this document. The LHMP acknowledges that the likelihood of future wildfires occurring is very high and that the City of Oroville has a high vulnerability to wildfires. The LHMP states that adherence to building codes and the use of fire-resistant construction methods as well as implementing sound vegetation management practices will reduce the impact of wildlife to future development.

The proposed Project would be required to comply with existing City standards to provide adequate access, fire flows, and other facilities to maintain an appropriate level of fire protection. Additionally, the Project would be required to comply with the *California Building Code* and *California Fire Code*. Therefore, the proposed Project would not exacerbate the existing conditions and would not expose people or structures to a significant risk of loss, injury or death involving wildfires. Therefore, impacts would be less than significant. No mitigation is required.

4.9.3 Mitigation Measures

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

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Regional Hydrology

Surface Water

According to the Department of Water Resources (DWR), the state has been subdivided into 10 hydrologic regions (DWR 2024a). The Project Site is located in the Sacramento River Hydrologic Region, which includes the entire California drainage area of the Sacramento River (California's largest river) and its tributaries. The region extends from Chipps Island in Solano County north to Goose Lake in Modoc County. It is bounded by the Sierra Nevada on the east, the Coast Ranges on the west, the Cascade and Trinity mountains on the north, and the Sacramento-San Joaquin River Delta on the south.

The Project Site is located in the Lower Feather River watershed, which begins downstream of Lake Oroville and includes that area tributary to the Feather River as it flows approximately 60 miles north to south before entering the Sacramento River at Verona. The Lower Yuba and Bear rivers also join the Lower Feather within this river reach. The Lower Feather River Watershed encompasses approximately 803 square miles of Sutter, Yuba, and Butte counties. River flows are regulated for water supply and flood control by the State Water Project through releases at Oroville Dam. The river is almost entirely contained within a series of levees as it flows through the fertile agricultural lands of the Sacramento Valley (Sacramento River Watershed Program 2024).

Groundwater

The Project Site overlies the Sacramento Valley – Wyandotte Creek groundwater subbasin, one of three groundwater subbasins within Butte County, as defined by DWR (DWR 2022a and California Water Library Groundwater Exchange 2024). In 2023, the Butte County Department of Water and Resource Conservation completed the *Groundwater Status Report 2022 Water Year* (Butte County 2023). This report presents the status of groundwater conditions and ground surface elevation monitoring based on data collected by Butte County and the DWR from 2021 to 2022. According to the report, in Water Year 2022, the combination of unusually low precipitation, warm temperatures, dry soils, along with reduced snow water content and lower reservoir storage from the preceding year resulted in unprecedented low runoff from the Sierra-Cascade snowpack. This resulted in Sacramento River Region unimpaired runoff of about 10.8 million acre-feet (AF), or about 61% of average at the endo of the 2022 Water Year. These conditions also contributed to the below average flow rates observed locally in both the Sacramento and Feather Rivers as well as in Butte and Big Chico creeks.

4.10.1.2 Project Site Hydrology and Onsite Drainage

Information provided in this section of the IS/MND was from the BRA and the Aquatic Resources Delineation (ARD) which was conducted by ECORP Consulting, Inc., which can be found in Appendix D. As mentioned above in Section 4.4.1, Biological Resources, the Project Site has delineated aquatic features totaling 0.116 acres. 0.009 acres of that was an unnamed intermittent creek.

Intermittent creeks are medium-order creeks that have seasonal surface water flow during the wet or rainy season. Intermittent creeks may not have surface water during dry periods. Runoff from precipitation is a supplemental source of water for stream flow. The unnamed intermittent creek located on the Project Site is approximately 2 feet wide within the Study Area and had 1 to 2 inches of flowing water present during the site visit. The unnamed intermittent creek is also exhibited as an OHWM. The OHWM was delineated in the field based on the presence of changes in average sediment texture, changes in vegetation species and cover, bed and bank, and break in bank slope.

The proposed Project site is located within relatively flat to gently rolling terrain situated at an elevational range of approximately 245 to 275 feet above mean sea level in the Northern High Sierra Nevada Foothills subregion of the Cascade Range Foothills floristic region of California. At the Oroville reporting station, approximately 1.1 miles southwest of the Study Area, the average winter temperature is 49.9 degrees Fahrenheit (°F) and the average summer temperature is 77.8 °F. Average annual precipitation is approximately 30.56 inches, which falls as rain (National Oceanic and Atmospheric Administration 2023).

As mapped by the Federal Emergency Management Agency (FEMA, 2011) National Flood Hazard Layer, the Project Site is in Flood Zone X, indicating that the Site is an area of minimal flood hazard. (Flood Insurance Rate Map [FIRM] 06007C0790E).

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

Woi	uld 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 groundwater quality?			\boxtimes	

Less Than Significant Impact

As mentioned previously there are intermittent creeks and other aquatic resources within the Project site. The proposed Project currently plans to avoid all wetland features as part of the project.

In accordance with NPDES regulations, the State of California requires that any construction activity affecting 1 acre or more, obtain a General Construction Activity Stormwater Permit to minimize the potential effects of construction runoff on receiving water quality. As described previously, the Project proposes the construction and operation of an RV Park with additional amenities. The General Permit requires the development and implementation of a SWPPP.

The SWPPP would include implementation of BMPs to reduce construction effects on receiving water quality by implementing erosion control measures and reducing or eliminating non-stormwater discharges. Examples of typical construction BMPs included in SWPPPs include, but are not limited to, using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; and installing sediment control devices such as gravel bags, inlet filters, fiber rolls, or silt fences to reduce or eliminate sediment

and other pollutants from discharging to the drainage system or receiving waters. SWPPP BMPs are recognized as effective methods to prevent or minimize the potential releases of pollutants into drainages, surface water, or groundwater. Strict SWPPP compliance, coupled with the use of appropriate BMPs, would reduce potential water quality impacts during construction activities.

According to the site plans, the proposed Project will be installed with 12-inch, 15-inch, and 18-inch storm drains. This will involve drop inlets, storm manholes, sanitary sewer lines, water mains, service laterals, gate valves, and blow-off valves and will be installed throughout the site to serve the RV parking pads and amenities.

Oroville Municipal Code Section 15.88.060 *Standards for Grading, Excavation And Site Clearance* requires sedimentation and erosion control for all grading and site preparation activities. These include BMPs needed in order to meet requirements of this chapter shall be chosen from the *2003 California Storm Water Quality Construction Handbook*.

The proposed Project would be required to prepare and comply with an approved SWPPP and Municipal Code Section 15.88.060. Compliance with these requirements would reduce the potential water quality impacts to less than significant.

Wo	uld 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

Treated water is available and will be provided by the Thermalito Water and Sewer District (TWSD). TWSD serves approximately 9,500 individuals and anticipates this number to increase to 15,272 by the year 2025, based on growth rates given by the Butte County Association of Governments (BCAG). TWSD has rights to approximately 8,200 acre feet (AF) of surface water from Concow Lake/Wilmore Reservoir with a 3.0 million gallons per day (mgd) backup supply coming from four wells, as needed. (City of Oroville 2015a).

Water demand within the District was 2,033 AF on average between 2016 and 2020. Taking into account historical water use, expected population increase and other growth, climactic variability, and other assumptions, water demand within the District is projected to be 2,468 AFY in 2025 and increase to 3,212 AFY by 2045. In dry year periods such as an extended 5 year drought, water demands are expected to be up to 2,092 AFY by 2025.

In September 2007, the U.S. Forest Service Technology and Development Program published a report titled "Water Use in Forest Service Recreation Areas: Guidelines for Water System Designers." Among the conclusions included in the report, the author stated, "Interestingly, water use does seem to be lower than it used to be in more developed campgrounds, but it seems to be higher than it used to be in less developed campgrounds." The report recommended a reduction in water demand flow of 40% compared

to the current design flow for developed campgrounds with individual site water and sewer connections (United States Department of Agriculture Forest Service 2007). The report references the Forest Service Handbook 7409.11, Section 44.11, Exhibit 1, which states that RV parks and campgrounds water supply system shall be designed and constructed in accordance with the following Average Daily Design Flow:

- (1) A minimum of 25 gallons per day per site for sites without individual connections
- (2) A minimum of 50 gallons per day per site for sites with individual water connections
- (3) A minimum of 50 gallons per day per site if water flush closets are provided in restrooms.

With the anticipated 50 gallons per day per site with the 127 RV pads, that would result in a generation of 6,250 gallons per day (gpd). These design values are intended to include RV usage at the site as well as other park facilities such as restrooms, showers, and laundry facilities (Sauers Engineering, Inc. 2019). The RV pads would result in an additional 7.01 AFY increase. The RV Park has additional amenities such as a pool, banquet hall, gym, and putting green but the water generation of these facilities is not anticipated to impact the water demands that TWSD has already assumed. Therefore, the Project would not substantially decrease groundwater supply and therefore result in a less than significant impact in this area.

The proposed Project would have the potential to remove a portion of the Project Site's surface area available for groundwater recharge due to the increase in impervious surfaces on the site. Impervious surfaces on the Project Site would include buildings, streets, and sidewalks. However, according to the Butte County Groundwater Management Plan (2004), Figure 2-7, the Project Site is not located in an area of substantial groundwater recharge. Therefore, the Project would have a less than significant impact on groundwater recharge.

Woı	ıld tl	ne Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	of t alte thr	ostantially alter the existing drainage pattern the site or area, including through the eration of the course of a stream or river or ough the addition of impervious surfaces, in a nner that would:				
	i)	result in substantial erosion or siltation onsite or offsite;			\boxtimes	
	ii)	substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;				
	iii)	create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or			\boxtimes	

i-iv) Less Than Significant Impact

There are vernal pools, seasonal wetlands, seasonal wetland swales, and intermittent creeks on the Project Site. Currently, the proposed Project plans to avoid all wetland features.

Construction activities within the Project Site would result in soil disturbances. For those activities that disturb one acre or more of land, a NPDES Construction General Permit would be required prior to the start of construction. To comply with the requirements of the NPDES construction General Permit, these projects would be required to file an NOI with the State of California and submit a SWPPP defining BMPs for construction and post-construction related control of the proposed Project site runoff and sediment transport. Requirements for the SWPPP include incorporation of both erosion and sediment control BMPs. SWPPP's generally include the following applicable elements:

- Diversion of offsite runoff away from the construction area.
- Prompt revegetation of proposed landscaped areas.
- Perimeter straw wattles or silt fences and/or temporary basins to trap sediment before it leaves the site.
- Regular sprinkling of exposed soils to control dust during construction during the dry season.
- Installation of a minor retention basin(s) to alleviate discharge of increased flows.
- Specifications for construction waste handling and disposal.
- Erosion control measures were maintained throughout the construction period.
- Preparation of stabilized construction entrances to avoid trucks from imprinting debris on city roadways.
- Contained wash out and vehicle maintenance areas.
- Training of subcontractors on general construction area housekeeping.
- Construction scheduling to minimize soil disturbance during the wet weather season.
- Regular maintenance and storm event monitoring.

Preparation of, and compliance with a required SWPPP will reduce potential runoff, erosion, and siltation associated with construction and operation. As such, the effects of the proposed Project on- and offsite erosion and siltation would be less than significant.

Implementation of the proposed Project may result in the increase of the rate or amount of surface runoff as the Project is developed. The City of Oroville's 2030 General Plan policies designed to address stormwater runoff that are applicable to the Project are as follows:

P8.2	Encourage project design that minimizes the potential for wind and water erosion to occur. Where necessary, require the preparation and implementation of a soil erosion plan, including soil erosion mitigation during construction.
P8.3	Encourage the utilization of Best Engineering Practices for stormwater collection and disposal.
P8.4	Require local storm drainage improvements be built to carry appropriate design-year flows resulting from buildout of the General Plan. Design storm drainage facilities for 2-, 10-, and 100-year discharges.
P8.5	Require that developers pay their fair share for construction of off-site drainage improvements, as determined by a site-specific stormwater drainage plan or the stormwater drainage master plan to be prepared under A8.1.
P8.6	Implement all necessary measures to regulate runoff from urban uses to protect the quality of surface and groundwater.
P8.7	Require new development to identify and adequately mitigate its stormwater impacts.
P8.9	Require installation of temporary drainage facilities as necessary during construction activities in order to adequately mitigate stormwater impacts.
P8.10	Require the installation of stormwater collection systems concurrently with construction of new roadways to maximize efficiency and minimize disturbance due to construction activity.

Project compliance with General Plan policies would require stormwater facilities that would restrict stormwater flows from the Project Site. As described above, stormwater drainage facilities are proposed to be installed throughout the Project Site. The proposed Project will be installed with 12-inch, 15-inch, and 18-inch storm drains. This will involve drop inlets, storm manholes, sanitary sewer lines, water mains, service laterals, gate valves, and blow-off valves and will be installed throughout the site to serve the RV parking pads and amenities. Therefore, the proposed Project would have a less than significant impacted related to erosion or flooding on or offsite or exceeding the capacity of an existing or planned stormwater drainage system.

FEMA flood hazard map 06007C0790E indicates that the entire Project Site is in unshaded Zone X. The Project Site is not located within a flood zone. Therefore, implementation of the proposed Project would result in a less than significant impact impeding or redirecting flood flows.

Woi	uld 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?			\boxtimes	

Less Than Significant Impact

Tsunamis typically impact coastlines and areas up to 0.25 mile inland. The Project Site is over 110 miles from the nearest coastline. The project would not be impacted by a tsunami.

Seiches generally impact locations adjacent to larger bodies of water such as lakes or reservoirs. The Project Site is located approximately 0.3 mile south of North Thermalito Forebay. While the Project Site is in close proximity to the North Thermalito Forebay, any seiche would have to go through the Nelson Park to reach the project site. Any impacts would be less than significant.

According to Figure SAF-3of the 2030 General Plan, the proposed Project Site is within the inundation area of Lake Oroville and failure of the Oroville Dam could result in release of water held behind the dam, and inundation of majority of the City of Oroville. A major seismic event would be the most likely cause of dam failure (City of Oroville 2015a). The General Plan Draft Supplemental EIR (City of Oroville 2015b) identifies that dam inundation due to failure of the Lake Oroville Dam would result in a significant and unavoidable impact related to exposure of people and structures to risks from flooding as a result a dam failure.

Lake Oroville Dam is under the jurisdiction of the California DWR Division of Safety of Dams (DSOD). Since August 14, 1929, the State of California has regulated dams to prevent failures, safeguard life, and protect property. DSOD provides oversight to the design, construction, and maintenance of more than 1,200 jurisdictional sized damns in California, including Lake Oroville. DSOD ensures dam safety by:

- reviewing and approving dam enlargements, repairs, alterations, and removals to ensure that the dam appurtenant structures are designed to meet minimum requirements;
- performing independent analyses to understand dam and appurtenant structures performance. These analyses can include structural, hydrologic, hydraulic, and geotechnical evaluations;
- overseeing construction to ensure work is being done in accordance with the approved plans and specifications;
- inspecting each dam on an annual basis to ensure it is safe, performing as intended, and is not developing issues. Roughly one third of these inspections include in-depth instrumentation reviews of the dam surveillance network data;

Periodically reviewing the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California (DWR 2024b).

On February 7, 2017, while the Oroville Dam the service spillway chute suddenly experienced failure and removal of a section of the concrete slab about halfway down the chute. This was immediately followed by rapid erosion of the foundation and adjacent ground, and progressive failure and removal of the chute slab in the upstream and downstream directions. Emergency evacuation of Oroville and areas within the Oroville Dam inundation area was ordered on February 12. The evacuation order was reduced to a warning on February 14 and residents returned home. Starting in May 2017, DWR and its construction contractors began repairing and rebuilding Oroville's main and emergency spillways. To ensure public safety, the main spillway was successfully repaired by November 1, 2017 in order to function as a flood control outlet if needed that winter. In 2018, the main spillway was fully reconstructed to final design and the emergency spillway was completed (DWR 2024c).

In 2017, the DSOD established the Spillway Reevaluation Program to assess dam appurtenant structures, including spillways, to confirm they meet minimum safety standards. This is an ongoing screening process and reevaluation of spillways at dams, starting with these that potentially pose the highest hazard. This evaluation includes the assessment of the spillway's design and construction and geologic attributes while concurrently reviewing the dam owner's maintenance and inspection program, the spillway's historical performance, and any previous spillway repairs. DSOD is working closely with dam owners to expedite the development of the required assessments and restore any known areas of disrepair (DWR 2024b).

As shown by the 2017 Oroville Dam spillway incident, the potential for dam failure can occur due to negligence and inadequate maintenance. DWR is continually assessing Oroville Dam; the Oroville Dam is formally inspected multiple times a year by various entities. The dam is inspected twice a year by the California Department of Water Resources' Division of Safety of Dams (DSOD) and annually by the Federal Energy Relicensing Commission Dam Safety Program. Further, the Dam is also inspected by an independent board of expert consultants every 5 years (DWR 2022d). As of September 2021, the condition of Oroville Dam is listed as *fair* by the DSOD. Fair is defined as "[n]o existing dam safety deficiencies are recognized for normal operating conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency." (DWR 2024d).

Therefore, an event such as the failure of Lake Oroville Dam has a low probability of occurring and is not considered to be a reasonably foreseeable event. Therefore, any impacts would be less than significant.

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

All water to the Project would be supplied by TWSD and no new Project-related groundwater wells are necessary to provide water to the Project. Once completed, the RV Park would be required to comply with any water conservation requirements put forth in the Butte County Groundwater Management Plan (Butte County 2004) or the Wyandotte Creek Subbasin Groundwater Sustainability Plan (Wyandotte Creek Groundwater Sustainability Agency 2024). Any impacts would be considered less than significant.

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 21.64 site is within the City of Oroville 2030 General Plan land use designations of Retail and Business Services and is zoned C-2. The 2030 General Plan identifies the Retail and Business Services as:

"This designation is intended to provide for business activities that offer goods and services to the community. This designation allows for a maximum floor area ratio (FAR) of 0.40, except in the Historic Downtown where a FAR of 2.0 will be allowed. Zoning districts specify where specific allowed uses, such as the production of goods, wholesale storage, and distribution of facilities, may be located (City of Oroville 2015a)."

The Oroville Municipal Code Title 17 Zoning Section 17.32.050 C-2—Intensive Commercial, describes the purpose C-2 zone as:

"To provide for more intensive commercial establishments, including those that deal in large, low-volume items and major repair services, or that require large, outdoor display and storage areas. (City of Oroville 2024b)".

Per the City of Oroville Title 17 Zoning Section 17.32.010 Allowed Uses in Commercial Districts, the operation of an RV park would require the issuance of a Use Permit to operate.

The Project Site is situated north of Nelson Avenue and Chinchen Electric Supply, east of 6th Street and Hearthstone School, west of Highway 70, and south of the Nelson Ballpark Complex and Highway 70. Single-homes are further south of the site, past Nelson Avenue.

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

			Less than		
		Potentially	Significant with	Less than	
Wo	uld the Project:	Significant	Mitigation	Significant	No
		Impact	Incorporated		Impact
a)	Physically divide an established community?				\boxtimes

No Impact

The proposed Project would be accommodated by existing roadways and would not require construction of new roadways that would preclude access to the surrounding areas. Implementation of the proposed Project would not physically divide an established community and there would be no impact.

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

The proposed Project is consistent with the City of Oroville's adopted General Plan policy. As mentioned above, the Project would be required to obtain a Use Permit to operate an RV Park. Project implementation would not 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. Any impact would be less than significant.

4.11.3 Mitigation Measures

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

4.12 Mineral Resources

4.12.1 Environmental Setting

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

Neither the City, the USGS' Mineral Resources Data System, nor the California DOC Division of Mine Reclamation (DMR) identify the Project Site as a mineral resource zone (DMR 2024; City of Oroville 2015a, USGS 2024b).

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

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

No Impact

As discussed above, the Project Site is not identified as having mineral resources. Therefore, the implementation of the proposed Project would not result the loss of availability of a known mineral resource that would be of value to the region. There would be no impact.

Wo	uld 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

As discussed above, the Project site is not identified as a mineral resource recovery site by the City or DMR. Implementation of the proposed Project would not result in the loss of availability of locally-important mineral resource recovery site. There would be no impact.

4.12.3 Mitigation Measures

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

4.13 Noise

This section documents the results of the Oroville RV Resort Project Noise Impact Assessment Memorandum, prepared by ECORP in 2024 (Appendix G). The purpose of this section is to estimate Project-generated noise levels and determine the level of impact the proposed Project would have on the environment. This section describes the existing environmental and regulatory conditions specific to noise and addresses the potential impacts posed by the proposed Project.

4.13.1 Environmental Setting

4.13.1.1 Noise Fundamentals

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

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

logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn} .

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

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

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

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

Human Response to Noise

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

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

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

Sensitive Noise Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. According to the City of Oroville General Plan Noise Element, noise-sensitive uses include residential areas, hospitals, convalescent homes and facilities, and schools.

The Project is proposing the construction of an RV Park with associated amenities. The nearest noise sensitive receptors to the Project Site are Hearthstone School and Nelson Avenue Middle School located directly west of the Project Site and residences located south of the Project Site, across Nelson Avenue.

4.13.1.2 Vibration Sources and Characteristics

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

4.13.1.3 Existing Noise Environment

The most common and significant source of noise in the City of Oroville is mobile noise generated by transportation-related sources within the City such as Highways 70 and 162, the Union Pacific and Burlington Northern Santa Fe Railroads, and the Oroville Municipal Airport. 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 developing area of the City and is bounded by Nelson Park to the north, Highway 70 to the east, Nelson Avenue to the south, and Hearthstone School and 6th Street to the west.

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 Oroville Municipal Airport, located approximately 2.86 miles southwest, 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

In order to quantify existing ambient noise levels in the Project Area, ECORP Consulting, Inc. conducted a 24-hour (long-term) noise measurement starting on May 6, 2024, and extending into May 7. This 24-hour noise measurement site is representative of typical existing noise exposure on the Project Site during a typical 24-hour day (see Appendix G). Additionally, ECORP conducted three short-term (15 minute) noise measurements on the morning of May 6, 2024. These short-term noise measurements are representative of typical existing noise exposure within and immediately adjacent to the Project Site during the daytime (see Appendix G). The 15-minute measurements were taken between 10:01 a.m. and 11:00 a.m. The average noise levels and location for each noise measurement are listed in Table 4.13-1.

15-Minute Noise Measurements									
Location Number	Location	CNEL	L _{eq}	L _{min}	L _{max} A	Time			
ST 1	Western boundary of Project Site directly adjacent to Hearthstone School classroom buildings.	N/A	49.2	41.8	69.0	10:45 a.m. – 11:00 a.m.			
ST 2	Front parking lot of Nelson Avenue Middle School.	N/A	55.3	38.9	74.5	10:01 a.m. – 10:16 a.m.			
ST 3	On Nelson Avenue across for the Project Site adjacent to house 523.	N/A	66.4	37.3	92.0	10:19 a.m. – 10:34 a.m.			
	24	-Hour Noise N	/leasurements						
Location Number	Location	CNEL	L _{eq}	L _{min}	L _{max}	Time			
LT 1	Western end of Project Site adjacent to Hearthstone School.	57.1	50.8	36.1	84.3	11:04 a.m. – 11:04 a.m.			

Source: Measurements were taken by ECORP with a Larson Davis SoundExpert 821 precision sound level meter, which satisfies the American National Standards Institute for general environmental noise measurement instrumentation. Prior to the measurements, the SoundExpert 821 sound level meter was calibrated according to manufacturer specifications with a Larson Davis CAL200 Class I Calibrator. See Appendix G for noise measurement outputs and a visual representation of the noise measurement locations.

Notes: 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. L_{min} is the minimum noise level during the measurement period and L_{max} is the maximum noise level during the measurement period. CNEL is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

4.13.2 Noise (XIII) Environmental Checklist and Discussion

Wo	uld 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?		\boxtimes		

Less Than Significant Impact with Mitigation Incorporated

4.13.2.1 Project Construction Noise

Onsite Project Construction Noise

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

The Project is proposing the construction of an RV Park with various associated amenities. Section 9.20.060 of the City Municipal Code prohibits construction between the hours of 9:00 p.m. and 7:00 a.m. on weekdays and between 6:00 p.m. and 10:00 a.m. on Saturdays, Sundays and holidays. The City exempts construction noise from City noise standards so long as it does not exceed the threshold of 86 dBA. Construction noise is temporary, short term, intermittent in nature, and would cease on completion of the Project. Additionally, construction would occur throughout the 21.64-acre Project site and would not be concentrated at one point. For the purposes of this analysis, the City's threshold of 86 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

The recent Fifth District of Appeal decision in *King and Gardiner Farms, LLC v. County of Kern et al.* (2020) 45 Cal.App.5th 814, held that the use of an absolute noise threshold for evaluating all ambient noise impacts violated CEQA because it did not provide a "complete picture" of the noise impacts that may result from implementation of the ordinance. As such, the proposed Project's construction noise is estimated and then added to the average daily ambient noise level in the Project Area as determined by the baseline noise survey conducted by ECORP Consulting (see Table 4.13-1). As previously described, the

dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. For example, a 65-dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by three dB). Additionally, when combining two separate sources where one of the noise sources is 10 dB or more greater than then other noise source, the noise contribution of the quieter source is completely obscured by the louder source.

The anticipated short-term construction noise levels generated for the necessary equipment were calculated using the Roadway Noise Construction Model for the site preparation, grading, building construction, paving and architectural coating phases. The nearest existing noise-sensitive land use to the Project Site is the Hearthstone School located directly adjacent to the western Project Site boundary. 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 simultaneously from the center of the Project Site (FTA 2018), which in this case is approximately 386 feet from the Hearthstone School property line. The anticipated short-term construction noise levels generated for the necessary equipment for each phase of construction are presented in Table 4.13-2.

Table 4.13-2. Construction Average (dBA) Noise Levels at Nearest Noise-Sensitive Receptor						
Construction Phase Noise Le		Existing Ambient Noise + Exterior Construction Noise Levels (dBA L _{eq})	Construction Noise Standards (dBA L _{eq})	Exceeds Standards?		
Site Preparation		69.9	86	No		
Grading	56.9	70.5	86	No		
Building Construction, Paving and Architectural Coating		71.4	86	No		

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

Notes: *Average ambient noise levels of the Project Area were estimated using the average L_{eq} of the three short term noise measurement taken on May 6, 2024, and identified in Table 4.13-1.

Construction equipment used during construction derived from CalEEMod. 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 approximately 386 feet from the nearest noise-sensitive receptor for construction activities.

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

As shown in Table 4.13-2, the Project's contribution of construction noise combined with the ambient noise environment would not exceed the 86 dBA construction noise threshold during any phase of construction at the nearest noise-sensitive receptors.

The Project Site is located directly adjacent to the Hearthstone School Campus. The primary function of schools is to provide a conducive space for education, requiring a quiet and focused atmosphere for effective teaching and learning. Excessive noise levels can significantly disrupt classroom activities, impair communication between teachers and students, and hinder students' ability to concentrate and comprehend lessons. In order to reduce Project construction noise as experienced at the adjacent campus, it is required that the implementation of temporary noise barriers be used during onsite Project construction. Noise barriers or enclosures can provide a sound reduction of 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2021). To be effective, a noise enclosure/barrier must physically fit in the available space, must completely break the line of sight between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source and extend lengthwise and vertically as far as feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In the case of Project construction, an enclosure/barrier would only be necessary for onsite Project construction along the western Project Site boundary, adjacent to Hearthstone School. As such the following mitigation is required.

Implementation of mitigation measure NOI-1 below would substantially reduce construction-generated noise levels from stationary and mobile equipment. As previously described, noise barriers or enclosures such as that required in mitigation measure NOI-1 can provide a sound reduction 35 dBA or greater (Western Electro-Acoustic Laboratory, Inc. 2021), which would be a reduction robust enough to ensure onsite construction noise at levels less than the applicable construction noise standard. Temporary noise barriers can consist of a solid plywood fence and/or flexible sound curtains, such as an 18-ounce tarp or a 2-inch-thick fiberglass blanket attached to chain link fencing.

Project onsite construction activities would not expose persons to and generate noise levels in excess of the applicable standards with implementation of mitigation measure NOI-1.

Offsite Project Construction Traffic Noise

Project construction would result in additional traffic on adjacent roadways over the period that construction occurs. According to CalEEMod, which is used to predict the number of construction-related automotive trips, the maximum number of Project construction trips traveling to and from the Project Site during the construction phase would not be expected to exceed 20 daily trips in total. According to Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013), a 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 Project Site, accessible from Nelson Avenue and 6th Street, is located adjacent to Hearthstone School, which serves kindergarten through high school and has approximately 220 students, as well as Nelson Avenue Middle School, which serves sixth through eighth grade and has approximately 442 students. Due to the rural nature of the City and limited bus routes for

students, it can be reasonably deduced that that a large majority of students are picked up and dropped off individually. Thus, Project construction would not result in a doubling of traffic, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and these trips would cease upon completion of the Project and therefore the impact is less than significant.

4.13.2.2 Project Operational Noise

According to the City of Oroville General Plan Noise Element, noise-sensitive uses include residential areas, hospitals, convalescent homes and facilities, and schools. These land uses are each considered noise-sensitive and may warrant unique measures for protection from intruding noise. The nearest existing noise-sensitive land use to the Project Site is Hearthstone School located directly adjacent to the western boundary.

Project Land Use Compatibility

The City of Oroville uses the land use compatibility table presented in the General Plan Noise Element which provides the City with a tool to gauge the compatibility of new land users relative to existing noise levels. This table identifies acceptable exterior and interior noise levels for various land uses, including residential and transient lodging land uses such as those proposed by the Project. In the case that the noise levels identified at the proposed Project Site fall within levels presented in the General Plan, the Project is considered compatible with the existing noise environment. As previously stated, the Project is proposing the construction of an RV Park with associated amenities which would accommodate short-term (transient lodging) and long-term (residential) guests. The long-term noise measurement taken on the Project Site from May 6th to May 7th, 2024, shown in Table 4.13-1, identifies an ambient noise level of 57.1 dBA CNEL. According to noise/land use compatibility table presented in the City's General Plan Noise Element, this noise level falls within the acceptable exterior noise level standard (≤60 dBA) residential and transient lodging land uses.

The Project Site is considered an appropriate noise environment to locate the proposed land use. This impact is less than significant.

Operational Traffic Noise

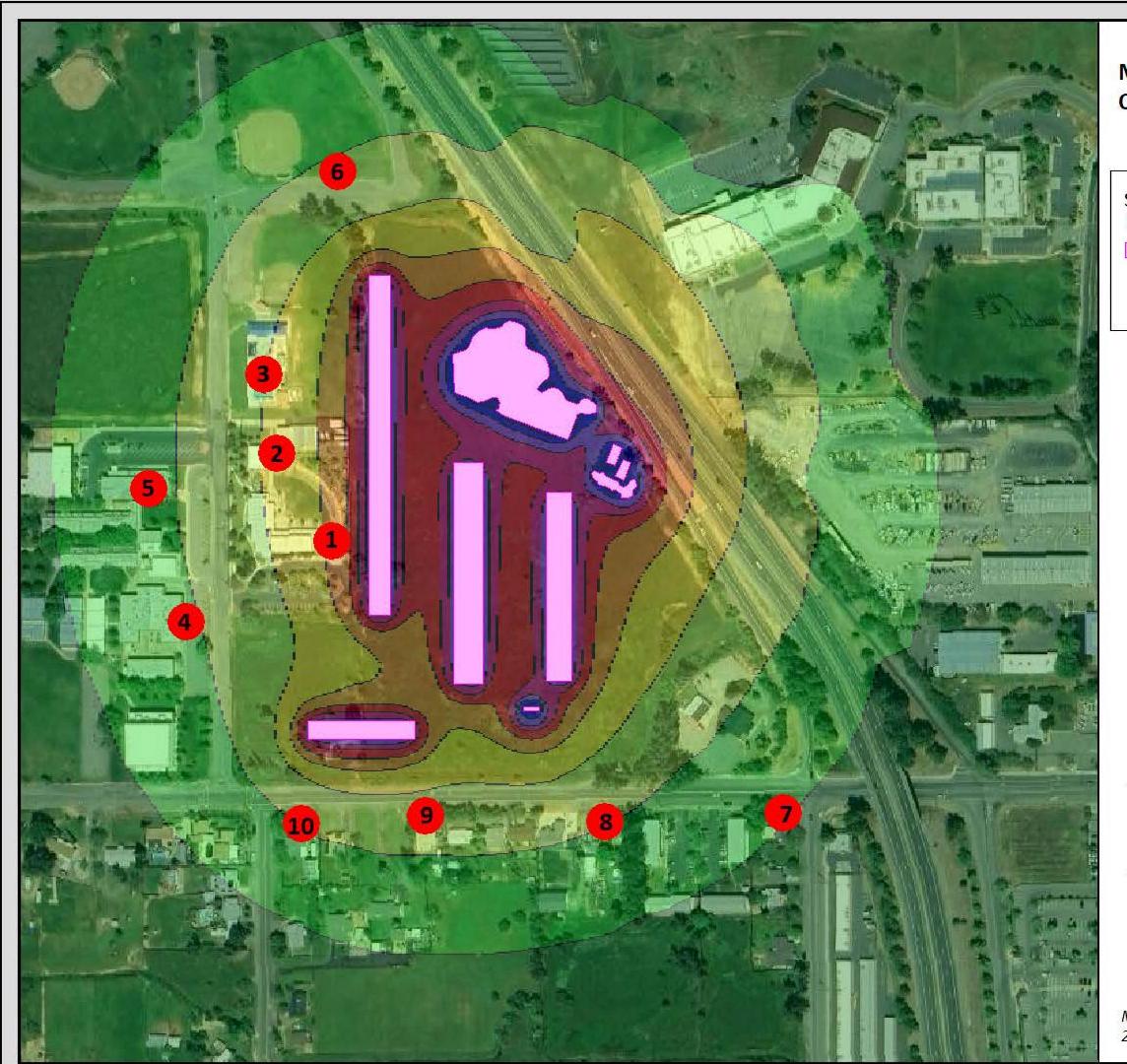
Project operations would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the Project Area. According to Caltrans' *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (2013), doubling of traffic on a roadway is necessary in order to result in an increase of 3 dB (a barely perceptible increase, as previously described). Per the Transportation Evaluation prepared by Headway Transportation (2024), the Project is anticipated to generate 360 daily trips. The Project Site, accessible from Nelson Avenue and 6th Street, is located adjacent to Hearthstone School which serves kindergarten through high school and has approximately 220 students as well as Nelson Avenue Middle School which serves sixth through eighth grade and has approximately 442 students. Due to the rural nature of the City and limited bus routes for students, it can be reasonably deduced that that a large majority of students are picked up and dropped off individually, resulting in at least 1,324 daily trips (220

Hearthstone students + 442 Nelson Avenue Middle School students = 662 total students x 2 trips per day = 1,324 total trips) from current student drop-off and pick-up activities under existing conditions. This number does not account for the trips contributed by faculty and staff. The Project would not result in a doubling of traffic, thus its 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 construction of an RV resort with various associated amenities on 21.64-acres in the City of Oroville. On-site noise associated with the proposed Project has been calculated using the SoundPLAN 3D noise model using Project Site Plans provided by the Project proponent. SoundPLAN 3D noise model generates computer simulations of noise situations based on the site's features. Further, SoundPLAN creates noise contour maps using reference noise levels, topography, point and area noise source, mobile noise sources, and intervening structures. The proposed Project's modeling scenario includes noise producing features such as the pickleball courts, putting green, pool/ play area, propane refill station, and the RV parking spaces. Area sources were modeled encompassing the main noise producing areas using reference noise measurements taken by ECORP Consulting, Inc. (see Appendix G).

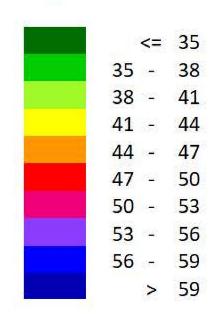
As previously described, the nearest noise sensitive receptors to the Project Site are Hearthstone School and Nelson Ave Middle School located directly west of the Project Site as well as residences located south of the Project Site across Nelson Avenue. The City has established exterior and interior noise thresholds for non-transportation related noise sources for various land uses. The City limits the exterior daytime (7:00 a.m. – 10:00 p.m.) noise to 50 dBA L_{eq} and the exterior nighttime (10:00 p.m. – 7:00 a.m.) noise to 45 dBA L_{eq} for all residential land uses. Additionally, the City limits the interior daytime noise level at all schools to 45 dBA L_{eq}. Furthermore, the City has established a daytime exterior noise level threshold of 65 dBA L_{eq} for all parks/playgrounds which are located in the Project vicinity as well. Table 4.13-3 shows the predicted exterior Project noise levels at ten noise-sensitive locations in the Project vicinity. A noise contour graphic (see Figure 4.13-1, Modeled Operational Noise Levels: Oroville RV Park) has been prepared to provide a visual depiction of the predicted noise levels in the Project vicinity from Project operations.

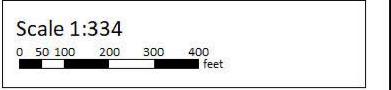


Modeled Operational Noise Levels: Oroville RV Park



Level scale in dB(A) Leq,d







Map Date: 5/10/2024 2023-217.01: Oroville RV Park

Table 4.13-3. Exterior Operational Noise Levels							
#	# Attributed to the Exte		Daytime/Nighttime Exterior Noise Standards (dBA L _{eq})	Exceed Daytime or Nighttime Exterior Standard?			
1	Hearthstone School Campus	44.1	N/A	No/No			
2	Hearthstone School Campus	41.5	N/A	No/No			
3	Nelson Pool	40.7	65 / -	No/No			
4	Nelson Avenue Middle School Campus	37.5	N/A	No/No			
5	Nelson Avenue Middle School Campus	37.1	N/A	No/No			
6	Nelson Softball Complex	37.9	65 / -	No/No			
7	Residence South of Project Site Fronting Nelson Avenue	34.8	50 / 45	No/No			
8	Residence South of Project Site Fronting Nelson Avenue	37.9	50 / 45	No/No			
9	Residence South of Project Site Fronting Nelson Avenue	39.3	50 / 45	No/No			
10	Residence South of Project Site Fronting Nelson Avenue	37.8	50 / 45	No/No			

Source: SoundPLAN v 9.0. Refer to Appendix G for Model Data Outputs.

Notes: N/A used for school land use that do not have exterior noise standards.

As shown in Table 4.13-3, Project operational noise would not exceed the City's exterior daytime or nighttime noise standards at any location. Additionally, as previously stated, the City limits the interior daytime noise levels within all schools to 45 dBA L_{eq} and within all residences to 40 dBA CNEL. As shown in Table 4.13-3, exterior noise levels at Hearthstone School Campus would reach levels up to 44.1 dBA and noise levels at Nelson Avenue Middle School would be 37.5 dBA L_{eq} as a result of the Project. The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002) and therefore exterior noise levels ranging from 37.5 to 44.1 dBA could be expected to attenuate to levels well below the interior noise standard of 45 dBA. Similarly, the Project resultant exterior noise levels of 39.3 dBA at the nearest residences, across Nelson Avenue, would attenuate to levels well below the residential interior noise standards. Project operations would not exceed the City's interior noise standard for school land uses.

As previously discussed, the average daily ambient noise of the area surrounding the Project Site under current conditions is approximately 56.9 dBA. This noise level is based on the average of the ambient noise measurements taken in the area and is generally representative of the existing noise environment. As shown above in Table 4.13-3, the proposed Project would contribute noise levels of approximately 44.1

to 34.8 dBA L_{eq} to the existing ambient environment during the daytime. As previously described, when combining two separate sources where one of the noise sources is 10 dB or more greater than then other noise source, the noise contribution of the quieter source is completely obscured by the louder source in terms of its contribution to the ambient noise environment. Thus, the existing ambient noise level of 56.9 dBA L_{eq} would remain unchanged due to the Project noise contribution of 44.1 to 34.8 dBA L_{eq} and the Project on-site activities would not perceivably influence the ambient noise levels of the area.

As such, operational noise produced as a result of the Project would result in a less than significant impact.

Woi	uld the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b)	Result in generation of excessive ground-borne vibration or ground-borne noise levels?			\boxtimes	

Less Than Significant Impact

4.13.2.3 Project Construction 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 as the distance from the source increases.

Construction-related ground vibration is normally associated with impact equipment, such as pile drivers and jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. Vibration decreases rapidly with distance and construction activities would occur throughout the Project Site and would not be concentrated at the point closest to sensitive receptors. Table 4.13-4 summarizes groundborne vibration levels associated with construction equipment.

Table 4.13-4. Representative Vibration Source Levels for Construction Equipment				
Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)			
Large Bulldozer	0.089			
Pile Driver	0.170			
Loaded Trucks	0.076			
Hoe Ram	0.089			
Jackhammer	0.035			

Table 4.13-4. Representative Vibration Source Levels for Construction Equipment				
Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)			
Small Bulldozer/Tractor	0.003			
Vibratory Roller	0.210			

Source: FTA 2018; Caltrans 2020

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

Consistent with FTA recommendations for calculating construction vibration, construction vibration was calculated to account for all Project construction equipment operating simultaneously from the center of the Project Site (FTA 2018). The nearest offsite structure of concern to the construction site, with regard to groundborne vibrations, is a classroom building on the Hearthstone School campus located approximately 390 feet from the Project Site center.

Based on the representative vibration levels presented for various construction equipment types in Table 4.13-4 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:

[PPVequip = PPVref x
$$(25/D)^{1.5}$$
]

Table 4.13-5 presents the expected Project related vibration levels at a distance of 390 feet.

Table 4.13-5. Construction Vibration Levels at 390 Feet								
	Receiver PPV Levels (in/sec) ¹							
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jackhammer	Small Bulldozer	Vibratory Roller	Peak Vibration	Threshold	Exceed Threshold	
0.0014	0.0012	0.0005	0.0000	0.0034	0.0034	0.3	No	

Notes: ¹Based on the Vibration Source Levels of Construction Equipment included on Table 4-4 (FTA 2018). Distance to the nearest structure is approximately 390 feet measured from the center of the Project Site.

As shown in Table 4.13-5, vibration as a result of construction activities would not exceed 0.3 PPV. Thus, Project construction would not exceed the recommended threshold. This impact is less than significant.

Project Operational Vibration

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

Wo	uld 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?				\boxtimes

No impact

The Oroville Municipal Airport, located approximately 2.86 miles southwest, is the closest airport to the Project Site. Per Figure NOI-2 of the City's General Plan Noise Element, the Project Site is located outside of all noise contours for the Oroville 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.

4.13.3 Mitigation Measures

NOI-1: The Project improvement and building plans will include the following requirements for construction activities:

- Construction contracts must specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state-required noise attenuation devices.
- As applicable, all equipment shall be shut off when not in use.
- Equipment staging shall be located in areas that create the greatest distance between construction-related noise/vibration sources and Nelson Avenue Middle School and Hearthstone School.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from Nelson Avenue Middle School and Hearthstone School.
- When used within 200 feet of any school boundary, jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be directed away from Nelson Avenue Middle School and Hearthstone School with the use of one-inch plywood or sound blankets. All such temporary sound barriers shall be positioned to reach up from the

- ground and block the line of sight between all portable stationary noise equipment and the schools. The shielding shall be devoid of holes and cracks.
- Project construction shall follow all provisions set forth in Chapter 9.20 of the City of Oroville Municipal Code.
- Per Section 9.20.060 of the City Municipal Code, construction is prohibited between the hours of 9:00 p.m. and 7:00 a.m. on weekdays and between 6:00 p.m. and 10:00 a.m. on Saturdays, Sundays and holidays.

4.14 Population and Housing

4.14.1 Environmental Setting

According to the California Department of Finance (DOF), which provides estimated population and housing unit demographics by year throughout the state, the City experienced a 0.3% decline in population from April 2020 to July 2022. The population estimate as of July 1, 2022 is 20,041. DOF estimates that there were 7,783 total housing units in the City (DOF 2022).

4.14.2 Population and Housing (XIV) Environmental Checklist and Discussion

Wo	uld 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)?			\boxtimes	

Less Than Significant Impact

The proposed Project consists of constructing and operating an RV Resort with accompanying amenities and related improvements. The Project is proposing transient occupancy be less than 30 days, unless the park goer's stay is work related and it can be raised to 90 days. It is not anticipated to cause unplanned population growth within the City of Oroville, either directly or indirectly. Therefore, implementation of the proposed Project would not directly contribute to a substantial unplanned increase in population within the County. This impact would be less than significant.

Would the Project:		Less than Potentially Significant with Significant Mitigation Impact 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 consists of constructing and operating an RV Resort with accompanying amenities and related improvements. The site is currently undeveloped and there is no housing located on the Project Site. Therefore, the Project would have no impact in this area.

4.14.3 Mitigation Measures

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

4.15 Public Services

4.15.1 Environmental Setting

4.15.1.1 Police Services

Police protection services in the City are provided by the City of Oroville Police Department (OPD). OPD operates out of a single police station located at 2055 Lincoln Street, approximately 1.6 miles southeast of the Project Site. OPD provides a wide range of services for the City of Oroville. OPD investigates suspected criminal activity, suspicious situations, mediates civil issues, effects arrests, conducts traffic enforcement, responds to traffic accidents and other calls for service, and routinely patrols the City. OPD is also responsible for animal control (via contract) within the Oroville City limits. Additionally, the OPD participates in a multi-agency narcotics task force, school resource officer program, drug awareness and gang education, and other types of community outreach programs. According to the General Plan, the OPD has a response time goal of less than 4 minutes for all emergency responses and 20 minutes for non-emergencies (City of Oroville 2015a and City of Oroville 2024c).

4.15.1.2 Fire Services

The greater Oroville area receives fire protection and emergency services from two separate fire departments: the City of Oroville Fire Department (OFD), and the CAL FIRE/Butte County Fire Department (BCFD). The Butte County Fire Station #63, located at 176 Nelson Avenue, is 0.3 miles away from the proposed Project Site. The Oroville Fire Department, located at 2055 West Lincoln Street, is 1.66 miles away from the proposed Project Site.

Based on the General Plan, OFD is committed to meeting the needs of Oroville citizens' by maintaining the service levels listed below. The times referenced are OFD's Standards of Cover Guidelines that were

adopted by the City Council and placed into the Safety Element of the General Plan (City of Oroville 2015a):

- Placing a first-due unit at a scene within 5 minutes of travel time for 90 percent of the city's population.
- Locating and staffing department units so that an effective response of four units with, at minimum, eight personnel is available to all areas of the City within a maximum travel time of 10 minutes for 90 percent of all structure fires.

4.15.1.3 Schools

The Project Site is served by the Thermalito Union School District (TUSD) and the Oroville Union High School District (OUHSD). TUSD serves students from pre-school to 8th grade at three elementary schools, one middle school, and a day school. OUHSD contains two comprehensive high schools, one charter high school, a community day school, and a continuation high school (Butte County 2024).

The nearest elementary school is Hearthstone School, which is adjacent to the proposed Project site. Hearthstone School is a charter school managed through Butte County of Education. The school gives students the option of being hybrid or participating through independent study. The school serves kindergarten through high school and has approximately 220 students (Hearthstone 2024).

4.15.1.4 Parks

The City of Oroville Department of Parks and Trees works with the Feather River Recreation and Park District (FRRPD) and the California Department of Parks and Recreation to coordinate open space corridor connections where possible and provide regional recreation opportunities in the Oroville area. The largest parks in the city are Riverbend Park (on the Feather River), Mitchell Park (south of Downtown) and Nelson Park and Recreation Center (north of Thermalito), all of which are owned and operated by the FRRPD. Some of the parks located within Oroville City limits are owned by the City but are operated and maintained by the FRRPD (City of Oroville 2015a).

The City of Oroville encompasses approximately 430 acres of parklands and recreational facilities within the City limits. There are additional open spaces under the protection of state agencies or conservation trusts. Additionally, there are 83 square miles of land that lie within the recreation planning area but outside of the City limits. Of that land, roughly 35 percent has been designated for parks and recreation, environmental conservation and safety, resource management, and the State Water Project (City of Oroville 2021).

The closest park to the Project Site is Nelson Park, which is adjacent to the Project Site to the North. Nelson Park is maintained by the FRRPD.

4.15.1.5 Other Public Facilities

Other local public facilities located within the Project Area include the Oroville City Hall, the Oroville Branch of the Butte County Library, and the Oroville Municipal Airport, Superior Court of California, County of Butte, Butte County Jail, and a variety of Butte County offices.

4.15.2 Public Services (XV) Environmental Checklist and Discussion

Wo	uld 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:			\boxtimes	
	Fire Protection?			\boxtimes	
	Police Protection?			\boxtimes	
	Schools?			\boxtimes	
	Parks?			\boxtimes	
	Other Public Facilities?			\boxtimes	

Less Than Significant Impact

4.15.2.1 Fire Protection

The proposed Project consists of constructing and operating an RV Resort with accompanying amenities and related improvements. The proposed Project would potentially result in a need fire protection service to respond to any potential incidents that may occur at the site, however, this would be a small increase to fire protection demands and it would not result in a need for new facilities or personnel. Services can adequately be provided by existing fire protection facilities. Therefore, this impact would be less than significant.

4.15.2.2 Police Protection

As discussed previously, the proposed Project consists of constructing and operating an (RV) Resort with accompanying amenities and related improvements. The proposed Project would potentially result in a need police protection service to respond to any potential incidents that may occur at the site, however, this would be a small increase to police protection demands and it would not result in a need for new

facilities or personnel. Services can adequately be provided by existing police protection facilities. Therefore, this impact would be less than significant.

4.15.2.3 Schools

The proposed Project would not increase the existing student population. The Project proposes the construction and operation of an RV Resort with accompanying amenities and related improvements and would not increase the City's or County's population that would require school services. This impact would be less than significant.

4.15.2.4 Parks

The proposed Project would not increase the overall population of the City that would result in the need for expanded parkland. Therefore, the Project's impacts relating to the parks would be less than significant.

4.15.2.5 Other Public Facilities

The proposed Project would not increase the overall population of the City that would result in the need for expanded public facilities such as childcare services or libraries. Therefore, the Project's impacts relating to other public facilities would be less than significant.

4.15.3 Mitigation Measures

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

4.16 Recreation

4.16.1 Environmental Setting

Recreational opportunities for both youth and adults are varied in the City of Oroville. A well-founded variety of programs and activities are available to residents at city, school, and private recreational facilities. The Department of Parks and Trees and FRRPD administer and implement programs to maintain and beautify the City's parklands and recreational facilities. The District FRRPD also offers leisure service programs such as recreational camps, fitness programs, gymnastics, field and track programs, nature festivals, basketball, softball, and many other programs. As stated previously there are approximately 430 acres of parklands and recreational facilities within Oroville City limits. This includes museums such as the Pioneer Museum, Bolt's Antique Tool Museum, and the Chinese Temple and Museum, and a nature center. Additionally, Lake Oroville State Recreation Area, the Thermalito Forebay and Afterbay, and the Feather River offer many recreational opportunities to city residents.

4.16.2 Recreation (XVI) Materials Checklist

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

Implementation of the proposed Project would provide additional recreational opportunities within the City of Oroville, and thereby contributing to the existing recreational facilities. Park goers would utilize existing active and passive recreational facilities in the Oroville region. However, the proposed Project is not anticipated to increase the use of existing neighborhood or regional facilities to the point of having substantial physical deterioration of the facility. Any impacts would be considered less than significant.

Wo	uld 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?				

Less Than Significant Impact

As mentioned previously, implementation of the proposed Project would provide additional recreational opportunities within the City of Oroville, and thereby contributing to the existing recreational facilities. Park goers would utilize existing active and passive recreational facilities in the Oroville region. However, the proposed Project is not anticipated to increase the use of existing neighborhood or regional facilities to the point of requiring expansion of a recreational facility. Any impacts would be considered less than significant.

4.16.3 Mitigation Measures

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

4.17 Transportation

This section is based on the analysis and recommendations presented in the CEQA Transportation Evaluation for the Oroville RV Resort prepared by Headway Transportation. This evaluation is included as Appendix H of this document (Headway Transportation, Appendix H).

4.17.1 Environmental Setting

The Project Site is currently vacant and located north of Nelson Avenue and Chinchen Electric Supply, east of 6th Street and Hearthstone School, west of Highway 70, and south of the Nelson Park and Ballpark Complex and Highway 70. Surrounding uses include single-family homes to the south.

4.17.1.1 Existing Street and Highway System

Access to the proposed Project will be provided by Nelson Avenue and 6th Street. Regional access is provided by SR 70 and SR 163 (Oro Dam Boulevard), which links the site with the other communities to the north and south of the City of Oroville.

4.17.1.2 Sidewalks

There are concrete and asphalt sidewalks at various locations along most City of Oroville streets, but they become less prevalent in sparsely developed areas such as the Project Site. There are sidewalks on both sides of Nelson Avenue towards Highway 70. Sidewalks on 6th street occur in front of the Hearthstone School, adjacent to the Project Site. Currently, there are no sidewalks on the Project Site.

4.17.1.3 Bicycle Facilities

The City of Oroville Bicycle Transportation Plan was adopted by the City on August 3, 2010. This Plan identifies numerous existing and proposed bike trails and on-street lanes throughout the City. There are currently no bike lanes on the streets surrounding the Project Site. Class I or Class II bicycle facilities are proposed on Nelson Avenue from Wilbur Road to the exiting bicycle lanes east of SR 70. According to the Bicycle Transportation Plan, paths listed as first priority are considered necessary to facilitate bicycle transportation in the City limits. Second-priority bikeways will be added to create connectivity in the regional area. All proposed bikeways are Class I or Class II, unless noted otherwise (City of Oroville 2010). This map is shown as Figure 4.17-1 of this document.

4.17.1.4 Bicycle Facilities

Public transportation in Oroville is provided through the area's public bus service, commercial bus services, shuttle service, taxi service and park-and-ride facilities. The BCAG operates the B-Line of the Butte Regional Transit system, which serves the residents of Oroville and provides intercity/regional and local fixed-route services. Oroville's B-Line service includes four local fixed transit routes within Oroville and three intercity/regional routes that provide commuter route service to Biggs, Chico, and Paradise. Commercial bus service is provided by Greyhound. Greyhound provides a limited-service bus stop in Oroville at the ARCO gas station located at 410 Oroville Dam Boulevard. Greyhound provides connections from Oroville to full-service stations located in the San Francisco Bay Area and the greater Sacramento area. Commercial bus service is also provided by Amtrak. Amtrak offers daily bus service between Medford (Oregon), Redding, Sacramento and Stockton. Commercial shuttle service is provided by the North Valley Shuttle with service to Sacramento International Airport. Taxi services are provided by Yellow Cab Company of Oroville and are available on demand or by reservation. Park-and-Ride lots provide

place for commuters in single-occupant vehicles to transfer to public transit or carpools. Oroville has one park-and-ride facility, which is owned by Butte County, on Highway 70 at Grand Avenue (City of Oroville 2015a).

4.17.2 Regulatory Setting

SB 743

The recommended metric in the CEQA guidelines for transportation impacts is VMT per capita per SB 743. The legislative intent of SB 743 is to balance the needs of congestion management with statewide goals for infill development, promotion of public health through active transportation and reduction of greenhouse gas emissions.

City of Oroville 2030 General Plan Transportation and Circulation Element

The City of Oroville's Transportation and Circulation Element specifies the general location and extent of existing and proposed major streets and other transportation facilities. The Element correlates with the Land Use Element to ensure that adequate pedestrian, bicycle, motor vehicle and emergency access is provided to serve both new and existing land uses. The Element includes the following policies related transportation planning:

- Policy 2.5: Reduce the total vehicles miles traveled through designation of land uses that support multi-modal travel and provision of more direct routes to high activity locations.
- Policy 3.3: New development shall ensure that safe and efficient emergency vehicle access is provided.
- Policy 6.9: Coordinate the construction and improvement of the bicycle system with development project adjacent to bikeways, and with park and recreational facilities, schools, and residential subdivisions.
- Policy 6.10: Ensure that developments located along existing and future bikeways provide for bicycle use within and adjacent to project boundaries.
- Policy 7.5: Require installation of sidewalks and/or walking paths along all city streets in newly developed areas.
- Policy 7.7: New development in Oroville will encourage pedestrian accessibility and facilitate the se of non-automobile forms of transportation.

Source: Fehr & Peers, 2007 and City of Oroville GIS, 2005.

4.17.3 Transportation (XVII) Environmental Checklist and Discussion

Woi	uld 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?		\boxtimes		

Less Than Significant Impact with Mitigation Incorporated

B-Line (Butte Regional Transit) provides regional public transit service throughout Butte County. Routes 20, 24, and 31 provide service near the project site, with the closest bus stop location approximately ½ mile away from the proposed Project. While the Project has the potential to incrementally increase demand for public transit, the increase is not likely to cause or necessitate changes to the transit system for facilities. The proposed Project would not make changes to the existing public transit system or conflict with any public transit plans.

As mentioned above, the Oroville 2030 General Plan includes a map of existing and proposed bicycle facilities throughout the City. Class I or Class II bicycle facilities are proposed on Nelson Avenue from Wilbur Road to the exiting bicycle lanes east of SR 70. Based on these policies, implementation of Mitigation Measure TRANS-1, which will require the construction of a sidewalk and bicycle land along the Project frontage on Nelson Avenue.

The proposed Project would not make any changes to existing multimodal facilities or conflict with multimodal transportation with construction of sidewalk and bicycle lane on Nelson Avenue. Therefore, with implementation of TRANS-1, the project would have a less than significant impact on alternative transportation modes and would not conflict with any program, ordinance, or policy.

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)?			\boxtimes	

Less Than Significant Impact

Per SB 743, CEQA Guidelines Section 15064.3 subdivision (b) requires the criteria for analyzing transportation impacts and establishes the Vehicle Miles Traveled (VMT) as the metric most appropriate measure of transportation impacts in a CEQA document. The City of Oroville formally adopted VMT thresholds on August 6, 2024, prior to the analyzation of transportation impacts included in this Initial Study. The *Technical Advisory on Evaluating Transportation Impacts in CEQA*, published December 2018 by the Governor's Office of Planning and Research (OPR), provides threshold guidance and states the following:

"Of land uses projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above [between no increase and a 15% reduction compared to existing levels] for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types."

Based on OPR's guidance, agencies may set their own VMT thresholds to align with the needs of their community. The overall recommendation is a quantified threshold between no increase and a 15 percent reduction. Therefore, local agencies can determine that any project that does not increase overall VMT per capita is considered to have less than significant impact.

Weekday daily, AM peak hour, and PM peak hour trip generation estimates were calculated based on average trip rates presented in the Institute of Transportation Engineer' (ITE) *Trip Generation Manual, 11th Edition* for Campground/Recreational Vehicle Park. Trip generation estimates were calculated for 137 total sites including 127 RV spaces, nine (9) Airstream rentals, and one (1) manager's cabin. Table 4.17-1 below shows the estimated trip generation:

Table 4.17-1: Trip Generation Estimates

Land Use	Ci=o	Trips ¹				
(ITE Code)	Size	Daily ²	AM	AM In/Out	PM	PM In/Out
Campground/RV Park (416)	137 sites	360	28	10 / 18	36	23 / 13

Notes: 1. Trips were calculated based on the following rates per site: AM Peak Hour -0.21 (36% in / 64% out); PM Peak Hour -0.27 (65% in / 35% out)

2. ITE does not have Daily trip rates for a Campground/RV Park. Daily trips were calculated as 10 times the PM peak hour Source: Headway Transportation, 2024

As shown in the table, the proposed Project is expected to generate approximately 360 daily, 28 AM peak hour, and 36 PM peak hour trips.

VMT was calculated for the project using the Butte County Association of Government (BCAG) travel demand model. The model does not have an RV Pak land use, therefore, the hotel land use was used as a proxy for the analysis. An equivalent trip generation was calculated based on the Hotel land use. The number of hotel rooms that would generate an equivalent number of trips as an RV Park with 137 site was determined based on the peak hour trip generation, as shown in Table 4.17-2 below:

Table 4.17-2: Equivalent Hotel Trip Generation Estimates

Land Use	Ci-o					
(ITE Code)	Size	Daily	AM	AM In/Out	PM	PM In/Out
Hotel (310)	61 rooms	487	28	16 / 12	36	18 / 18

Notes: 1. Trips were calculated based on the following rates per room: Daily -7.99; AM Peak Hour -0.46 (56% in / 44% out);/PM Peak Hour- 0.59 (51%/ 49% out)

Source: Headway Transportation, 2024

As shown above, 61 hotel rooms also generates 28 AM peak hour and 36 PM peak hour trips (the same as 137 sites) and conservatively more daily trips. Therefore, 61 hotel rooms were used in the VMT analysis and modeling.

The proposed Project is located in traffic analysis zone (TAZ) 759 which includes single family housing, retail, park and school land uses in the Baseline (without Project) scenario. Table 4.17-3 below show the "VMT per Worker" for TAZ 759 with the addition of the proposed Project, analyzed as 61 hotel rooms. The home based work (HBW) and non-home based (NHB) measures are used for comparison purposes since the hotel land use is a commercial type land use for the purposes of VMT modeling.

Table 4.17-3: Equivalent Hotel Trip Generation Estimates

Land Use	VMT Attraction					
(ITE Code) Size	VMT – TAZ 759 (HBW + NHB)	Project VMT	Workers	VMT per Worker		
Baseline	4,904			8.01		
Baseline Plus Project	5,104	200	61	3.29		
Cumulative No Project	7,297			7.45		
Cumulative Plus Project	7,550	253	61	4.15		

Notes: Detailed in Appendix X.

HBW – Home Based Work; NHB – Non-Home Based Oroville Citywide Average VMT per Worker used.

Source: Headway Transportation, 2024

As shown in the table, the project VMT per worker under Baseline Plus Project and Cumulative Plus Project conditions is less than Oroville citywide average VMT per worker under Baseline No Project and Cumulative No Project conditions.

Therefore, the proposed Project will not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) and impacts will be 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)?			\boxtimes	

Less Than Significant Impact

The proposed Project involves the construction and operation of an RV park with associated amenities. The existing access routes to the Project do not indicate any unusual conditions. The proposed Project would not introduce incompatible uses or features that would significantly impact safety. The design of the project driveway would be in accordance with City of Oroville standards, including line of sight and clear vision triangle requirements. With all access built to City standards, the proposed Project would have a less than significant impacted related to safety would not create a substantial increase in hazards due to a geometric design feature or incompatible uses.

-			Less than		
		Potentially Significant	Significant with	Less than	
Wou	Would the Project:		Mitigation	Significant	No
		Impact	Incorporated	Impact	Impact
d)	Result in inadequate emergency access?			\boxtimes	

Less Than Significant Impact

Access to the Project Site will be provided via direct connection to Nelson Avenue and 6th Street through a total of three onsite street connections. All onsite intersections and improvements would be required to be designed to meet City roadway standards. No construction activities would impede the use of surrounding roadways in an emergency evacuation. The proposed Project involves the construction and operation of an RV park with associated amenities and would not result in inadequate emergency access. Implementation of the proposed Project would result in a less than significant impact and no mitigation is required.

4.17.4 Mitigation Measures

TRANS-1: Pedestrian and Bicycle Improvements. The Project shall construct off-site pedestrian sidewalk improvements and a bicycle lane along the Project frontage along Nelson Avenue to City of Oroville standards.

4.18 Tribal Cultural Resources

A Cultural Resources Inventory Report was prepared by ECORP (2024c) for the proposed Project to determine if cultural resources, including tribal cultural resources, were present in or adjacent to the Project Area and assess the sensitivity of the Project Area for undiscovered or buried cultural resources. The 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.

The analysis of cultural resources was based on a records and literature search conducted at the NEIC of the CHRIS at California State University, Chico on January 5, 2024, a literature review, historical maps and photographs review, and a field survey on February 1, 2024. The literature search included the results of previous surveys within a 0.5-mile radius of the proposed Project location.

4.18.1 Environmental Setting

Ethnographically, the Project Area is in the territory occupied by the Maidu. The Konkow, or Northwestern Maidu, occupied the Northern Sacramento Valley and surrounding foothills of the Sierra Nevada range. The Maidu, based on cultural and linguistic differences, have been differentiated into three major related divisions: the Northeastern (Mountain Maidu), Northwestern (Konkow), and Southern.

The Konkow occupied territory immediately to the southwest of the Mountain Maidu, along the Feather and Sacramento rivers to their southern boundary at the Sutter Buttes. The Konkow were primarily located in the lower elevations of the Sierra Nevada and along the valley floor (Riddell 1978). Tribal territories

adjacent to the Maidu and Konkow included the Atsugewi and Yana to the north, the Nomlaki and Patwin to the west, the Paiute and Washoe to the east, and the Nisenan to the south.

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 foothills during the winters. Resources exploited in this environment include wild rye, pine nuts, acorns, fish, and invertebrates. Summers in the mountains gave them access to deer meat, skins, and other items for food, clothing, and shelter for the winter months.

The village community, the primary settlement type among the Maidu-Konkow, consisted of three to five small villages, each composed of about 35 members. Among the mountain Maidu, village communities were well defined and based on geography. In contrast, the Konkow were dispersed throughout the valley floor along river canyons, and as a result, village communities were less concentrated or definable. In terms of permanent occupation sites, both groups preferred slightly elevated locations that provided visibility of the surrounding area and were away from the water-laden marshes and meadows. The Mechoopda Village, formerly located near downtown Chico, was home to many Maidu well into historical times.

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

Clothing, accessories, and other personal items were manufactured using elaborate basket weaving techniques, shell, and bone ornamenting, and by incorporating feathers, game skins, plant roots, and stems into objects. Shell, in the form of beads for currency or as valuable jewelry, was very desirable and was exchanged for food, obsidian, tobacco, and pigments (Kroeber 1925; Riddell 1978).

Summary of Consultations

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

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

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

- 1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

- b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or
- c. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b 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 TCRs 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.

On October 8, 2024, the City of Oroville sent Project notification letters to the Mooretown Rancheria of Maidu Indians Tribe who had previously submitted a general consultation request letter pursuant to Section 21080.3.1(d) of the PRC. The letter provided the tribe with a brief description of the Project and its location, the contact information for the City of Oroville's authorized representative, and a notification that the tribe has 30 days to request consultation. The City received no request for further consultation from the Tribe. Therefore, consultation with the Mooretown Rancheria of Maidu Indians Tribe concluded on November 8, 2024.

4.18.2 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Wo	uld t	he Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	sig in a s ge sco wit	use a substantial adverse change in the inificance of a tribal cultural resource, defined Public Resources Code Section 21074 as either ite, feature, place, cultural landscape that is ographically defined in terms of the size and ope of the landscape, sacred place, or object the cultural value to a California Native nerican 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		\boxtimes		
	ii)	A resource determined by the lead agency, in its discretion and supported by substantial		\boxtimes		

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

As conveyed in the *Cultural Resources Inventory Report* conducted by ECORP Consulting, Inc., no known tribal cultural resources were identified at the Project Site or within a 0.5-mile radius during the records search and literature review performed. On February 1, 2024, ECORP performed a field investigation of the Project Site and APE, which concluded that no cultural resources were observed onsite. Additionally, the NAHC records search of the NAHC Sacred Lands File was completed for the proposed Project revealing a negative search result for sacred lands within the Project Site. On January 5, 2024, general request for information letters were sent to each representative list for the tribes on the NAHC. On October 8, 2024, the City of Oroville initiated the Tribal Consultation process notifying the Mooretown Rancheria of Maidu Indians Tribe, pursuant to Section 21080.3.1(d) of the PRC. The City of Oroville received no request for further consultation from the Tribe. Therefore, consultation with the Mooretown Rancheria of Maidu Indians Tribe concluded on November 8, 2024.

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

4.18.3 Mitigation Measures

With implementation of mitigation measure CUL-1, no additional mitigation measures are required.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

As stated in Section 4.10, Hydrology, the Project Site would receive water from the TWSD. TWSD serves approximately 9,500 individuals and anticipates this number to increase to 15,272 by the year 2025, based on the growth rates given by the BCAG. TWSD has rights to approximately 8,200 AF of surface water from Concow Lake/Wilnore Reservoir with a 3.0 mgd backup supply coming from four wells, as needed (City of Oroville 2015a). The Project includes construction and operation of an RV Park with associated amenities. According to the 2020 Urban Water Management Plan from the Thermalito Water and Sewer District,

water demand within the District was 2,033 AF on average between 2016 and 2020. Taking into account historical water use, expected population increase and other growth, climactic variability, and other assumptions, water demand within the District is projected to be 2,468 AFY in 2025 and increase to 3,212 AFY by 2045. In dry year periods such as an extended 5-year drought, water demands are expected to be up to 2,092 AFY by 2025 (TWSD 2021).

In order to provide water for the RV park, the Project proposes connecting to the existing water main for both domestic and firewater supply. Water utility connections and onsite infrastructure would be subject to the City of Oroville Municipal Code, as well as compliance with TWSD design standards.

4.19.1.2 Wastewater

The City of Oroville is served by three wastewater collection agencies: the City of Oroville, TWSD, and the Lake Oroville Area Public Utility District. These three agencies have a Joint Powers Agreement with the Sewerage Commission-Oroville Region (SC-OR) to handle wastewater treatment disposal (City of Oroville 2024d).

The Project site is within the TWSD service area for wastewater collection. TWSD provides wastewater collection services to approximately 1,985 customers or approximately 2,650 Equivalent Dwelling Units. Wastewater dry weather flows average 0.41 mgd presently and are expected to grow to 0.67 mgd within the next 20 years. Monthly instantaneous Peak Wet Weather Flows (PWWF) are 4 mgd. TWSD's collection system consists of 40 miles of sanitary sewer line with approximately 560 utility access holes and is generally in adequate condition. TWSD's collection system discharges into the SC-OR west interceptor pipe for treatment at their plant. On average, dry weather flows are at approximately 30 percent capacity and wet weather flows are at approximately 70 to 80 percent capacity. During extreme wet weather events, the system experiences the highest level of inflow and infiltration impact at the east trunk line. The east trunk line has almost overflowed during rainy days during major storm events (City of Oroville 2015a).

4.19.1.3 Storm Drainage

The City of Oroville currently maintains approximately 60 miles of storm water drainage pipes and trenches, thousands of utility access holes and drop inlets, plus six regional detention basins. Storm water drainage infrastructure is essential to the safety of Oroville's citizens and their property. The City's storm water infrastructure is designed and engineered to protect residents in the occurrence of an extreme hydrologic event or more commonly known as a 100-year storm event or more commonly known as a 100-year storm event (City of Oroville 2024e).

4.19.1.4 Solid Waste

The City of Oroville's Franchise waste hauler is Recology. Recology offers recycling, food waste, yard trimmings and garbage pickup. The closest transfer station is the Butte Colusa Counties transfer station and office, located at 2720 South Fifth Avenue in Oroville (Recology 2024 and City of Oroville 2024f).

4.19.1.5 Electricity and Natural Gas

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas 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 two-thirds of California, from Bakersfield to almost the Oregon and Nevada state lines. It provides 16 million people with electricity and natural gas across 70,000 square miles. In 2017, PG&E announced that 80 percent of the company's delivered electricity comes from greenhouse gas emission-free sources, including renewables, nuclear, and hydropower (PG&E 2024).

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

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

Water

The Project would increase the demand for water in the City. However, all new development would be required to comply with the General Plan Public Facilities and Services Element policies. Policies related to water and applicable to the proposed development are as follows:

P6.4	Require the installation of water lines concurrently with construction of new roadways to maximize efficiency and minimize disturbance due to construction activity.
P6.6	Ensure that all proposed developments can be adequately served by available water supplies.
P6.7	Ensure that all new development is consistent with and meets the requirements of Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) prior to approval of City Council.
P6.8	Condition new development on the availability of sufficient water supply, storage, and pressure requirements for the City.

P6.10 Encourage the use of drought-resistant landscaping and the use of reclaimed wastewater for agriculture and landscape irrigation supply water. Ensure that all reclaimed wastewater complies with State wastewater treatment and reclamation regulations and standards.

P6.11 Support all efforts to encourage water conservation by Oroville residents and businesses, and public agencies, including working with water providers, to implement water conservation programs and

Development of the Project would increase the demand for water in the City and from TWSD due to human consumption and irrigation required for landscaping. As discussed in *Section 4.10 Hydrology*, with the anticipated 50 gallons per day per site with the 127 RV pads, that would result in a generation of 6,250 gallons per day (gpd). These design values are intended to include RV usage at the site as well as other park facilities such as restrooms, showers, and laundry facilities (Sauers Engineering, Inc. 2019). The RV pads would result in an additional 7.01 AFY increase. The RV Park has additional amenities such as a pool, banquet hall, gym, and putting green but the water generation of these facilities is not anticipated to impact the water demands that TWSD has already assumed.

incentives that facilitate conservation efforts.

Therefore, the additional water demand would not result in a need for new or expanded water treatment facilities. All onsite water infrastructure would be the responsibility of the proposed Project. Additionally, General Plan Policies P6.6 and P6.8 require the availability of water for approval of a project and P6.10 and P6.11 encourage the use of water conservation reducing the amount of water demand for a project. As such, the proposed Project would not result in the relocation or construction of new or expanded water facilities. The Project would have a less than significant impact in this area.

Wastewater

The TWSD provides sewer collection services to Project Site which is then treated at the SC-OR Wastewater Treatment Facility (WTF). The permitted average dry weather flow capacity of the SC-OR WTF is 6.5 mgd (RWQCB 2021). Based on the SC-OR Monthly Flows Report, the average daily wastewater flow at the treatment facility was 4.805 mgd in March 2023. TWSD accounted for approximately, 0.584 mgd of this amount (SC-OR 2023). The proposed Project is anticipated to increase wastewater flows, however, recently the facility has embarked on an upgrade to the WTF, and will be able to handle a new capacity of 13.3 mgd (SC-OR 2024).

All new development would be required to comply with the General Plan Public Facilities and Services Element policies. Policies related to water and applicable to the proposed development are as follows:

P6.10 Encourage the use of drought-resistant landscaping and the use of reclaimed wastewater for agriculture and landscape irrigation supply water. Ensure that all reclaimed wastewater complies with State wastewater treatment and reclamation regulations and standards.

P7.3	Require all development that is in areas that are currently served or could be feasibly served by sewers to be connected to a sewer conveying wastewater to the Sewerage Commission – Oroville Region's (SC-OR) treatment plant.
P7.4	The approval of new urban development shall be conditioned on the availability of adequate long-term capacity for wastewater conveyance, treatment and disposal sufficient to service the proposed development. The agencies that provide services to new development will be primarily responsible for making determinations regarding adequate availability.
P7.10	Ensure that all new and repaired sewer collection and transmission systems are designed and constructed in such a manner as to minimize potential inflow and infiltration.
P7.11	Installation of sewer lines should occur concurrently with construction of new roadways to maximize efficiency and minimize disturbance from construction activity.

The proposed Project would be required to be consistent with Policies P7.3 and P7.4, and would need to contribute to the implementation of system improvements to ensure wastewater collection and treatment facilities have sufficient capacity to serve the Project. Therefore, any impacts would be less than significant.

Wo	uld 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

Refer to Item a) above. The Project will have a less than significant impact in this area.

Wo	uld 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?			\boxtimes	
	Than Significant Impact to Item a) above. The Project will have a less than sig	nificant impa			
	•	nificant impa	Less than	Less than	
Refer	•	•		Less than Significant Impact	No Impact

Less Than Significant Impact

Construction-related waste typically consists of non-hazardous building material or debris generated during the construction of buildings, RV pads, park amenities, and other associated infrastructure (i.e. water and sewer lines). Construction solid waste would be brought to the Neal Road Recycling and Waste Facility in Butte County. The Neal Road Recycling and Waste Facility is the major disposal site for Butte County solid wastes. This landfill has an anticipated cease operations date of January 1, 2048 and has a remaining capacity of 20,847,970 tons (CalRecycle 2024).

According to the U.S. Environmental Protection Agency, the average rate of solid waste generated at campgrounds is approximately 0.92 lb per visitor per day. Additionally, the average solid waste generated from a rental Airstream is expected to be approximately 1.46 lbs per visitor per day (U.S Environmental Protection Agency 1971). Even with the additional amenities that the RV park is constructing, the solid waste generated from RV park patrons is not enough to impair solid waste reduction goals or generate an excess of capacity. Construction or operation of the proposed Project is not expected to exceed or impair the existing landfill. Any impacts would be less than significant and no mitigation is required.

Wo	uld 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?			\boxtimes	

Less Than Significant Impact

The proposed Project is required to comply with all local, state, and federal statues regarding solid waste, including Municipal Code Chapter 15.84 Recycling and Diversion of C&D Waste. No operations-generated acutely toxic or otherwise hazardous materials are expected to be generated by the proposed RV park. Any impacts would be less than significant.

4.19.3 Mitigation Measures

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

4.20 Wildfire

4.20.1 Environmental Setting

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

The proposed Project Site is relatively flat with slopes up to Highway 70. The site is vacant undeveloped grassland with a few trees that are proposed to be removed as part of construction of the proposed Project. FHSZ mapping is performed by CAL FIRE and is based on factors such as fuels, terrain, and weather. The Project Site is in an area designated by CAL FIRE as a moderate FHSZ (CALFIRE 2007).

4.20.2 Wildfire (XX) Environmental Checklist and Discussion

lanc	cated in or near state responsibility areas or ds classified as very high fire hazard severity es, 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?			\boxtimes	

Less Than Significant Impact

The Project Site is not designated by CAL FIRE as a VHFHSZ. Furthermore, there are no VHFHSZs located nearby. The proposed Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. Any impacts would be less than significant.

land	ocated in or near state responsibility areas or ds classified as very high fire hazard severity es, 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?			\boxtimes	

Less Than Significant Impact

The Project Site is not in an area designated by CAL FIRE as a VHFHSZ. Furthermore, no Very High FHSZs are located nearby (CAL FIRE 2024). Also, the Project Site is not located in a SRA (CAL FIRE 2024). Any impacts would be less than significant.

land	ocated in or near state responsibility areas or ds classified as very high fire hazard severity les, 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?			\boxtimes	

Less Than Significant Impact

The Project Site is not in an area designated by CAL FIRE as a VHFHSZ. Furthermore, no VHFHSZs are located nearby. Also, the Project Site is not located in an SRA (CAL FIRE 2024). Any impacts would be less than significant.

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

No Impact

The Project Site is not in an area designated by CAL FIRE as a VHFHSZ. Furthermore, no VHFHSZs are

located nearby. Also, the Project Site is not located in an SRA (CAL FIRE 2023). The Project would have no impact in this area.

4.21 Mandatory Findings of Significance

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

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

Less Than Significant Impact with Mitigation

As stated previously in Section 4.4, Biological Resources, with implementation of Mitigation Measures BIO-1 through BIO-11 the proposed Project would result in a less than significant impact on the habitat of wildlife species or population, on any plant or animal community, and would not restrict the range of a rare or endangered plant or animal. Furthermore, as stated above in Section 4.5, Cultural Resources, with the implementation of proposed Mitigation Measures CUL-1, development of the proposed Project would not result in significant impacts to Cultural Resources.

Doe	es 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)?			\boxtimes	

Less Than Significant Impact

Project impacts would not be cumulatively considerable. No mitigation is required relevant to potential cumulative impacts.

For natural resource subjects (Aesthetics, Agriculture and Forest Resources, Biological Resources, Cultural Resources, Geology and Soils, Hydrology and Water Quality, and Mineral Resources), there would be no cumulative effects because all impacts would be less than significant or would be reduced to less than significant with mitigation incorporated. In addition, the project would temporarily involve minimal hazardous materials use associated with construction and would not result in a cumulative effect on the environment.

The nature of the proposed Project would not induce substantial population growth or result in the development of new housing. Therefore, the proposed Project would not result in a cumulative effect regarding increased demand or expansion for services or utilities. Furthermore, there are no approved or planned projects within proximity to the proposed Project that would contribute to cumulative effects.

Doe	s 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?		\boxtimes		

Less Than Significant Impact with Mitigation

Direct and indirect impacts to human beings would be less than significant with the implementation of mitigation measures listed in this Initial Study Mitigated Negative Declaration.

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LIST OF APPENDICES

Appendix A – Design Plan Set, Melton Design Group, 2023

Appendix B – Air Quality and Greenhouse Gas Emission Assessment Memorandum. ECORP, 2024

Appendix C – Biological Resources Assessment for the Oroville RV Resort Project, ECORP, 2024

Appendix D – Aquatic Resources Delineation. ECORP, 2023

Appendix E – Cultural Resources Inventory Report (Confidential), ECORP, 2024

Appendix F – Energy Consumption Assessment for the Oroville RV Resort Project, ECORP, 2024

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Appendix H – CEQA Transportation Evaluation – Oroville RV Resort, Headway Transportation, 2024

APPENDIX A

Appendix A – Design Plan Set, Melton Design Group, 2024

LANDSCAPE PLANS FOR THE CONSTRUCTION OF:

OROVILLE RV PARK

504 NELSON AVENUE OROVILLE, CA 95965

PREPARED FOR:



CITY OF OROVILLE

1735 MONTGOMERY STREET OROVILLE, CA 95965 530-538-2405

GENERAL CONSTRUCTION NOTE:

CONSTRUCTION UNDER THIS CONTRACT SHALL COMPLY WITH THE LATEST CALIFORNIA BUILDING CODE (CBC), CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PUBLIC CODE (CPC), CALIFORNIA ELECTRICAL CODE (CEC), AND THE LATEST CALIFORNIA ENERGY STANDARDS AS AMENDED BY THE STATE OF CALIFORNIA AND THE LOCAL JURISDICTION.

PREPARED BY:



REPRESENTATIVE TITLE

MELTON DESIGN GROUP 820 BROADWAY ST.

SACRAMENTO 1930 G STREET SACRAMENTO, CA 95811 (916) 754-2153

PREPARED BY OR UNDER THE SUPERVISION OF:

	DATE
GREG MELTON RLA No. 4217	
ACCEPTED BY:	
\$ <u>0</u>	DATE
CITY REPRESENTATIVE NAME	

INDEX OF SHEETS

A6.0 SIGN PROGRAM

SHEET	TITLE
 L0.0	TITLE SHEET
L1.0	CONSTRUCTION PLAN
L1.1	CONSTRUCTION PLAN
L1.2	CLUBHOUSE AREA ENLARGEMENT
L1.3	RV SITE ENLARGEMENT
L2.0	PLANTING PLAN
L2.1	PLANTING PLAN
L3.0	IRRIGATION PLAN
L3.1	IRRIGATION PLAN
L4.0	LIGHTING PLAN
L4.0 L4.1	LIGHTING PLAN LIGHTING PLAN
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C1,C2	PRELIMINARY GRADING PLAN
C3,C4	UTILITY PLAN
A 4 0	
A1.0	CLUBHOUSE FLR PLAN & ELEVATIONS
A2.0	WELCOME CENTER FLR PLAN & ELEVATIONS
A3.0 A4.0	WASHHOUSE FLR PLAN & ELEVATIONS
A4.0 A5.0	MAINTENANCE SHOP FLR PLAN & ELEVATIONS CABIN FLR PLAN & ELEVATIONS
7.0.0	CADIN I LIX FLAN & LLL VATIONS



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CONSULTANT

CLIENT

WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

TITLE SHEET

DATES

NO. DESCRIPTION

PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

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BANQUET HALL (3,570 SF)

& CLUBHOUSE (7,000 SF)

NO-MOW TURF MOUNDING, SEE PLANTING PLAN,

PL-104

GARDEN AREA

03-02

820 BROADWAY ST.

SHEET ___ OF ___

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F-105

F-101

03-02

P-101

PL-101

03-02

S-113

PL-101

PL-101

PK-102

SS-109

SS-108

S-113

NORTH

40

SCALE: 1'' = 40'

80

03-01

03-02

PK-102

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WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

CONSTRUCTION PLAN

DATES

NO. DESCRIPTION

PLOT DATE: --

PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

SHEET ___ OF ___

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03-02

SS-101

236.74 IP S-113

F-101

K-101

S-113

F-105 WASH HOUSE

REFERENCE NOTES SCHEDULE

CONCRETE PAVING, 4" DEPTH.

CONCRETE PAVING, VEHICULAR

COLOR: STANDARD GRAY CONCRETE.

USAPICKLEBALL.ORG FOR STANDARDS.

COLOR STANDARD GRAY CONCRETE. INSTALL PER PLAN, SEE DETAIL.

DECORATIVE CONCRETE, 4" DEPTH.

MEDIUM BROOM FINISH, COLOR:

ARCHITECT BEFORE POUR

CONCRETE CURB (6"W).

ATHLETIC EQUIPMENT

PLAY EQUIPMENT

DESCRIPTION

DESCRIPTION

INSTALL PER PLAN, SEE DETAIL.

PUTTING GREEN, HOLES & FLAGS

ADVENTURE PLAY STRUCTURE

MODEL:, MANUFACTURER:

MEDIUM BROOM FINISH, COLOR: STANDARD GRAY CONCRETE.

EXPANSION JOINTS PLACED @ 18` AND SCORE LINES SPACED @ 6`

SCORE AS SHOWN, CONFIRM SCORE PATTERN WITH LANDSCAPE

CONCRETE PICKLEBALL COURTS (2) - 4" DEEP CONCRETE PAVING

WITH SURFACING AND SCORING PER DETAIL. REFERENCE

CONCRETE STAGE (24"H), TO HAVE A MEDIUM BROOM FINISH,

03 CONCRETE

DESCRIPTION

- SEE DETAIL

SYMBOL DESCRIPTION

SYMBOL

EA-101

SYMBOL

SYMBOL

03-02

QTY DETAIL

QTY DETAIL

QTY DETAIL

QTY DETAIL

F-102

SPLASH EQUIPMENT

METAL PICKET FENCE 8' H

4' H SPLIT RAIL FENCE, WOOD

6' H PEDESTRIAN SWING GATE

20'W ROLLING VEHICULAR GATE

KEYPAD AT ARRIVAL GATE

4' H STEEL PICKET FENCE AT DOG PARK

GROUND SPRAYS AT SPLASH PAD/PLAZA

DESCRIPTION

DESCRIPTION

FENCE

F-105

F-106

QTY DETAIL

QTY DETAIL

03-04

WELCOME CENTER & STORE

S-115

SITE FURNISHINGS

SS-107

PROPANE REFILL

PK-102

S-103

QTY DETAIL

SS-104

SS-103

PK-101

DESCRIPTION RECTANGULAR PICNIC TABLE MODEL:, MANUFACTURER: ART FEATURE. INSTALL PER PLAN. OUTDOOR SPA, CAPACITY: 8

OUTDOOR POOL, CAPACITY: STEEL BENCH MODEL:, MANUFACTURER: CONCRETE CORNHOLE BOARDS GATHERING SPACES W/ GAS FIREPITS

POOLSIDE LOUNGER CHAIR BASALT COLUMN FOUNTAIN SITE STRUCTURES DESCRIPTION WASHHOUSE, 2,688 SF

RENTAL CABINS, 16'X25'

MONUMENT SIGN. MODEL: , FINISH: MANUFACTURER: ARRIVAL AND GATEWAY SIGN 10'X10' CABANAS SHADE STRUCTURE, STEEL

PAVING DESCRIPTION QTY DETAIL DECOMPOSED GRANITE OR BALALT FINES, 4" DEEP **PARKING** DESCRIPTION QTY DETAIL ADA PARKING - STRIPING AND SIGNAGE. SEE DETAIL PARKING LOT STRIPING PLANTING QTY DETAIL DESCRIPTION

QTY DETAIL DESCRIPTION GRAVEL FILL, SEE PLAN. SYMBOL

WELCOME CENTER (3,275 SF)

& MANAGER APT. (1,190 SF) MAINTENANCE/STORAGE BUILDING, 750 SF PROPANCE REFILL STATION BANQUET HALL (3,570 SF) & CLUBHOUSE (7,000 SF)

PLAY ELEMENT MODEL:, MANUFACTURER: ON-GRADE PLANTER. INSTALL PER PLAN, SEE DETAIL. NATURAL CLIMBING LOG TURF AREA, SEE PLANTING PLAN. **EP-104** NATURAL CLIMBING BOULDERS NO-MOW TURF MOUNDING, SEE PLANTING PLAN, GARDEN AREA

REFERENCE NOTES SCHEDULE

03 CONCRETE

3.
4.
5.
6.
7.
8.
PLOT DATE: -
PROJECT NUMBERS

NORTH

MELTON DESIGN GROUP: 2544

F-104 NORTH

F-103 0 20 40

P-101

S-111

PL-103

SPLASH EQUIPMENT

CONSULTANT PROJECT #: --

SHEET NUMBER

SHEET ___ OF ___

© MELTON DESIGN GROUP INC COPYRIGHT 2023 WELTON DESIGN GROUP: 2544

RV SITE TNEMEDAAJNE

SHEET TITLE

OROVILLE RV PARK

PROJECT

WESTERN CARE CONSTRUCTION COMPANY, INC.

TNBIL

CONSULTANT

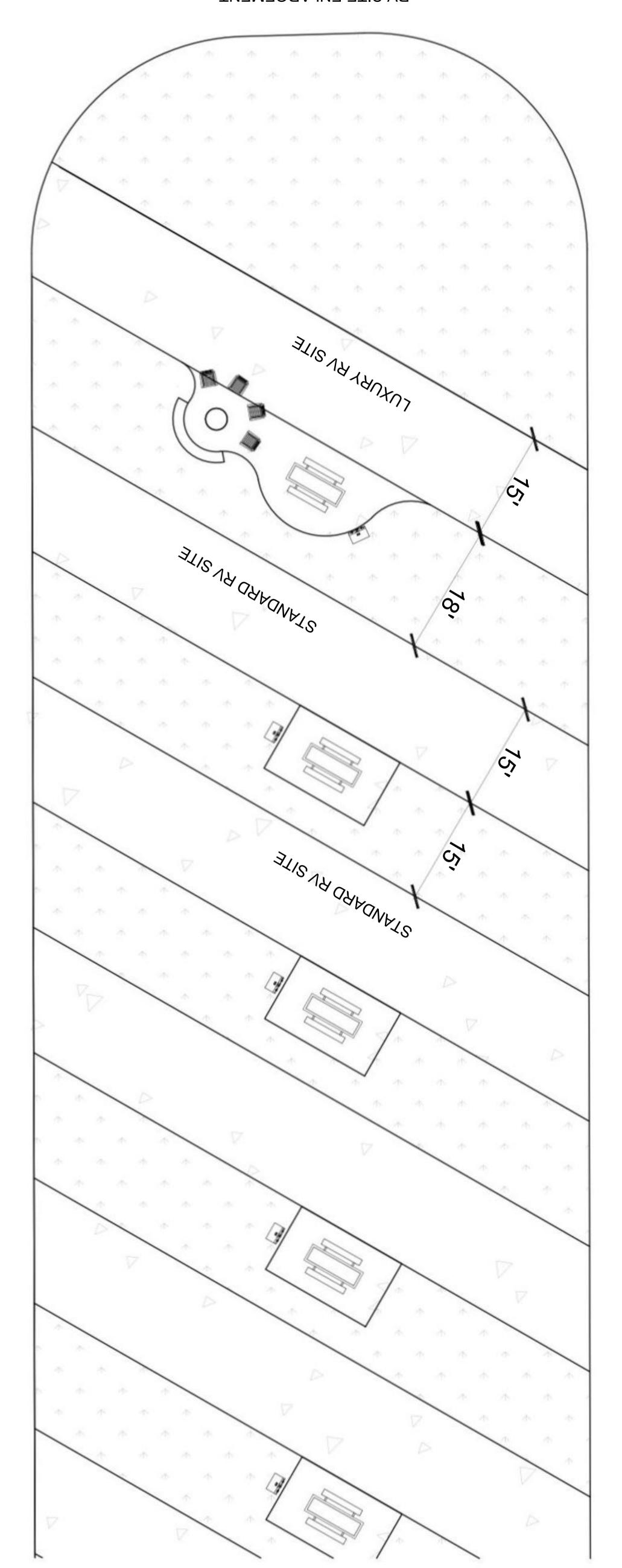


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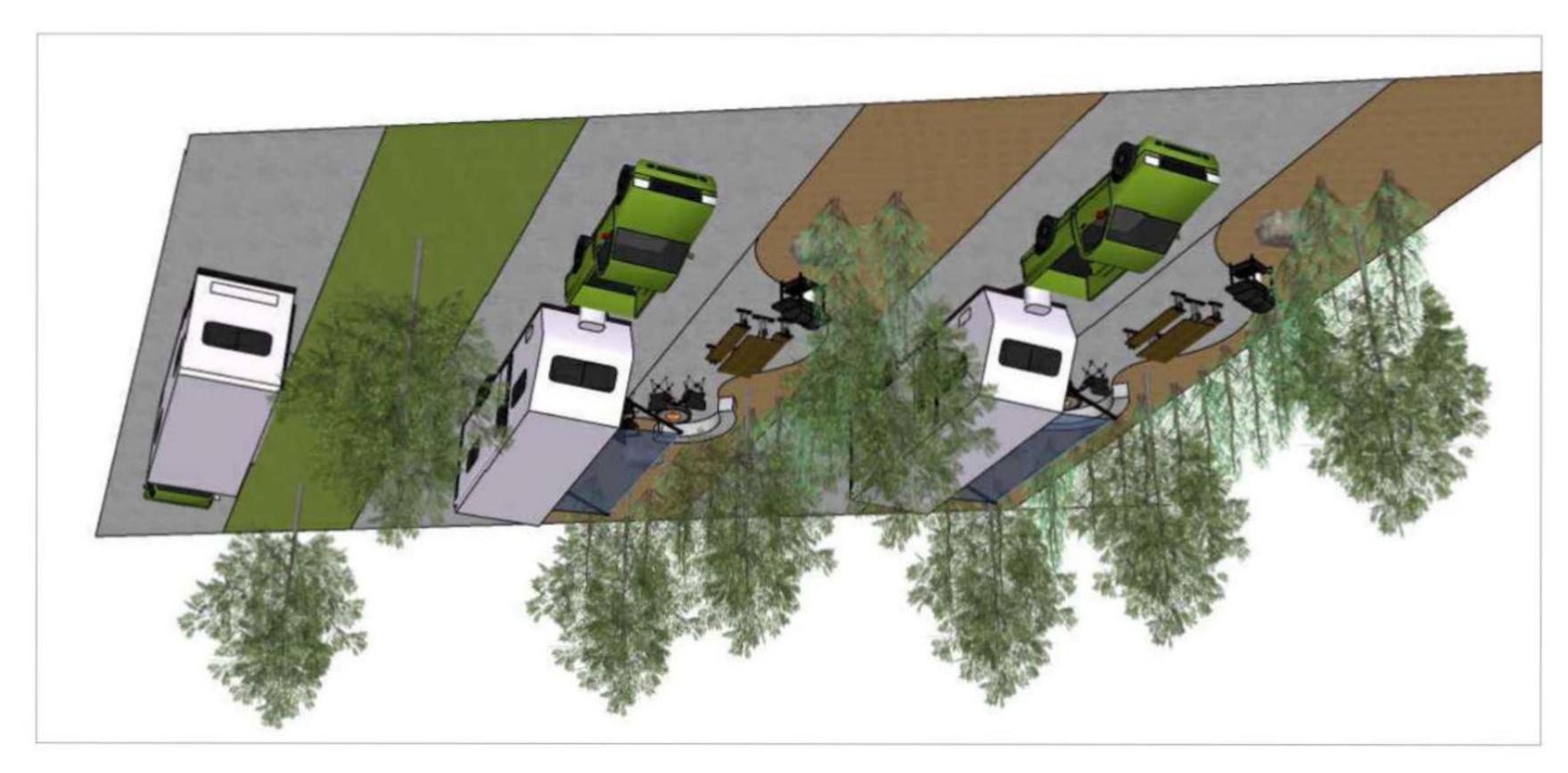
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RV SITE ENLARGEMENT SCALE: *_=1'-0"



LUXURY RV SITE - RENDER



LUXURY RV SITE - PLAN VIEW RENDER



FILE NAME: G:\MDG(2500-2599)\2544 Oroville RV Resort\2544 CAD\CDs\SHEETS\2544-L3.0-PLNT.dwg

PLANT SCHEDULE CALOCEDRUS DECURRENS ACER X FREEMANII 'JEFFERSRED' ACER RUBRUM 'BOWHALL' ACER PALMATUM 'BLOODGOOD'

COMMON NAME

BLOODGOOD JAPANESE MAPLE

BOWHALL RED MAPLE

AUTUMN BLAZE® FREEMAN MAPLE

CARPINUS BETULUS `FASTIGIATA`

CEDRUS DEODARA

BOTANICAL NAME
CERCIS OCCIDENTALIS GINKGO BILOBA 'PNI 2720' CORNUS KOUSA CERCIS CANADENSIS 'FOREST PANSY' PISTACIA CHINENSIS 'KEITH DAVEY' PICEA PUNGENS 'GLAUCA' LIRIODENDRON TULIPIFERA LAGERSTROEMIA INDICA X FAURIEI 'TUSCARORA' KEITH DAVEY CHINESE PISTACHE TUSCARORA CRAPE MYRTLE
TULIP POPLAR FOREST PANSY EASTERN REDBUD KOUSA DOGWOOD BLUE COLORADO SPRUCE PRINCETON SENTRY® MAIDENHAIR TREE SIZE

15 GAL

PLOT DATE: August 30, 2023 - 11:32 PM

NORTH

40 SCALE: 1" = 40'

DATES

SHEET NUMBER

0

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CONSULTANT

WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

PLANTING PLAN

DATE

PROJECT NUMBERS MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

PLOT DATE:

PLANT SCHEDULE

י אַ	15 GAL	WESTERN REDBUD	CERCIS OCCIDENTALIS	8 8	
SIZE		_	BOTANICAL NAME	CODE	SHRUBS
24" BOX		COAST REDWOOD	SEQUOIA SEMPERVIRENS `APTOS BLUE`	SA	
15 GAL		COLUMBIA LONDON PLANE TREE	PLATANUS X ACERIFOLIA 'COLUMBIA'	PC2	
15 GAL		KEITH DAVEY CHINESE PISTACHE	PISTACIA CHINENSIS 'KEITH DAVEY'	Ŗ	
15 GAL		BLUE COLORADO SPRUCE	PICEA PUNGENS 'GLAUCA'	PG	
15 GAL		TULIP POPLAR	LIRIODENDRON TULIPIFERA	듸	
15 GAL		TUSCARORA CRAPE MYRTLE	LAGERSTROEMIA INDICA X FAURIEI 'TUSCARORA'	⊏	
EE 15 GAL	Ĥ	PRINCETON SENTRY® MAIDENHAIR TREE	GINKGO BILOBA 'PNI 2720'	GP	
15 GAL		KOUSA DOGWOOD	CORNUS KOUSA	Ç	
15 GAL		FOREST PANSY EASTERN REDBUD	CERCIS CANADENSIS 'FOREST PANSY'	CF	
24" BOX		DEODAR CEDAR	CEDRUS DEODARA	CD	
15 GAL		UPRIGHT EUROPEAN HORNBEAM	CARPINUS BETULUS `FASTIGIATA`	CF2	
15 GAL		INCENSE CEDAR	CALOCEDRUS DECURRENS	CD2	
15 GAL		AUTUMN BLAZE® FREEMAN MAPLE	ACER X FREEMANII 'JEFFERSRED'	AA	
15 GAL		BOWHALL RED MAPLE	ACER RUBRUM 'BOWHALL'	AB2	
15 GAL		BLOODGOOD JAPANESE MAPLE	ACER PALMATUM 'BLOODGOOD'	AB	
SIZE		COMMON NAME	BOTANICAL NAME	CODE	TREES

PROJECT

OROVILLE RV PARK

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PLANTING PLAN

DATES DATE

PROJECT NUMBERS PLOT DATE: --

MELTON DESIGN GROUP: 2544
CONSULTANT PROJECT #: --

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NORTH

40 80

SCALE: 1" = 40'

PLOT DATE: August 30, 2023 - 11:33 PM

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2. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROGRAM THE IRRIGATION CONTROLLER BASED ON RECOMMENDATIONS FROM THE LANDSCAPE WATER AUDIT AND AS REQUIRED BY THE 2015 UPDATED MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, CALIFORNIA CODE OF REGULATIONS TITLE 23, DIVISION 2, CHAPTER 2.7 AND EXISTING FIELD CONDITIONS. THE CONTRACTOR SHALL MAKE SCHEDULING ADJUSTMENTS AS NEEDED TO ACHIEVE THE MOST EFFICIENT APPLICATION OF WATER BASED ON PLANT TYPE, WATER USE REQUIREMENTS, SOIL TYPE, GRADES, SUN EXPOSURE, SHADE, WIND, ETC.

EXISTING CONDITIONS. COORDINATE WITH OWNER TO REVIEW

EXISTING CONDITIONS ARE DIFFERENT THAN STATED, CONTACT

LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

IRRIGATION SYSTEM PRIOR TO START OF WORK. IN THE EVENT THAT

3. THIS DRAWING IS DIAGRAMMATIC. IRRIGATION COMPONENTS SHOWN BENEATH PAVING, UTILITIES, PLANTINGS, ETC. ARE FOR GRAPHIC CLARITY ONLY. PLACE ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS WITHIN THE ADJACENT PLANTER EXCEPT WHERE PIPES CROSSOVER BENEATH PAVING, STRUCTURES, WALLS, ETC.. THE CONTRACTOR SHALL PLACE PIPING TO PREVENT CONFLICT WITH UTILITIES, TREE LOCATIONS, PLANTING, HARDSCAPE COMPONENTS, WATER PLAY FEATURES, PLAY AREAS AND FURNISHINGS. SEE PLANTING PLAN FOR PLANT COUNT AND LAYOUT. REFER TO CONTRACT DOCUMENTS FOR PROJECT SCOPE.

4. THE CONTRACTOR SHALL PROVIDE COMPLETE RECORD DRAWINGS TO OWNER AT COMPLETION OF PROJECT AND AS REQUIRED BY CONTRACT DOCUMENTS.

5. THE IRRIGATION SYSTEM IS DESIGNED TO OPERATE AT THE FOLLOWING PRESSURES: HUNTER I20 ROTORS-25PSI, DRIP TREE AND SHRUB RINGS-25PSI, DRIPPER LINE - 25PSI. ALL IRRIGATION SHALL BE INSTALLED BY CONTRACTOR AT THE LOCATIONS INDICATED ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF ANY DEVIATION WHICH MAY AFFECT THE SPACING OR LOCATION OF THE IRRIGATION LAYOUT.

6. TRENCH IRRIGATION MAIN LINES TO A DEPTH OF 24". TRENCH ROTOR LINES TO A DEPTH OF 18", TRENCH DRIP LINES TO A DEPTH OF 2"-4". TRENCH ALL MAIN AND LATERAL LINES TO A DEPTH OF 24" WHERE CROSSING BENEATH PAVEMENT AND PLACE WITHIN SLEEVE, SIZE AND TYPE PER PLAN. SLEEVE CONTROL AND COMMON WIRES SEPARATELY IN 3" PVC SCHEDULE 40 CONDUIT ALONG ENTIRE LENGTH AND WHEN CROSSING BENEATH PAVEMENT AS

7. CONTRACTOR SHALL BE RESPONSIBLE TO SLEEVE ALL MAIN LINES AND LATERAL LINES WHEN CROSSING BENEATH PAVEMENT, WALKWAYS, BUILDINGS, WALLS, ETC. WHETHER OR NOT SHOWN ON THE IRRIGATION PLAN. SIZE PER PLAN AND/OR AS NEEDED BASED ON THE NUMBER OF IRRIGATION LINES AND SIZES. CONTROL WIRES SHALL BE SLEEVED INDEPENDENTLY. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH OTHER TRADES TO INSTALL SLEEVES REQUIRED.

8. ALL IRRIGATION REMOTE CONTROL VALVES, QUICK COUPLER VALVES, ELECTRIC PULL BOXES SHALL BE INSTALLED IN PLANTED AREAS AND IN VALVE BOXES. NO VALVES/VALVE BOXES SHALL BE INSTALLED IN PAVED AREAS OR IN TURF AREAS. VALVE BOXES SHALL

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONNECT THE NEW IRRIGATION CONTROLLER TO 110V POWER AND BE RESPONSIBLE TO COORDINATE WITH OTHERS. PROVIDE OWNER TRAINING ON CONTROLLER SCHEDULING FOR BOTH ESTABLISHMENT AND MAINTENANCE SCHEDULES.

10. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE LANDSCAPE WATER AUDIT PER REQUIREMENTS SET FORTH IN THE 2015 UPDATED MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, CALIFORNIA CODE OF REGULATIONS TITLE 23, DIVISION 2, CHAPTER2.7. CONTRACTOR SHALL MAKE FINAL ADJUSTMENTS TO THE IRRIGATION SYSTEM BASED ON LANDSCAPE WATER AUDIT RECOMMENDATIONS. SEE CONTRACT DOCUMENTS.

11. MAIN LINE PIPE SIZE TO BE 3" PIPE. LATERAL PIPE SIZE DOWNSTREAM OF LAST PIPE SIZE CALL OUT TO BE 1" PIPE.

12. SEE CONTRACT DOCUMENTS, SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.

IRRIGATION SCHEDULE

SYMBOL MANUFACTURER/MODEL ARC PSI GPM RADIUS ZURN 975
HUNTER MP2000 PROS-04-PRS40-CV K 90-210 55 21' REDUCEL
INSTALL I

MATCHLINE SEE SHEET L3.1

HUNTER MP2000 PROS-04-PRS40-CV K 90-210 55 21'

HUNTER MP3000 PROS-04-PRS40-CV Y 210-270 55 30'

HUNTER MP3500 PROS-04-PRS40-CV LB 90-210 55 35'

MANUFACTURER/MODEL/DESCRIPTION HUNTER ICZ-151-XL-40

DRIP CONTROL ZONE KIT. 1-1/2IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 40PSI. FLOW RANGE: 20 GPM TO 60 GPM. 120 MESH STAINLESS STEEL SCREEN. 1-1/2IN. INLET X SINGLE 2IN. OUTLET DRIP TREE RING

HUNTER HDL-06-12-CV: PRESSURE COMPENSATING HUNTER DRIPLINE WITH 0.6 GPH FLOW. LIGHT BROWN TUBING WITH GRAY STRIPING. APPROXIMATELY (33) EMITTERS X 0.60 GPH AT 12" O/C SPACING = 0.33 GPM, PLUS (1) ADJUSTABLE FLOW BUBBLER TO ROOT BALL. SEE DETAIL FOR RING DIAMETERS AND LAYOUT.

MANUFACTURER/MODEL/DESCRIPTION

HUNTER ICV-G 1IN., 1-1/2IN., 2IN., AND 3IN. PLASTIC ELECTRIC REMOTE CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL USE.

ISOLATION VALVE
ISOLATION VALVE - 2" AND SMALLER - WILKINS 850-XL FULL
PORT BRONZE BALL VALVE. 2-1/2" AND LARGER - NIBCO
619-RW-SON FLANGED GATE VALVE WITH SQ. OP. NUT. SIZE
PER PIPE SIZE. LOCATION SHOWN FOR GRAPHIC CLARITY.
INSTALL IN PLANTER. CONTRACTOR SHALL LOCATE FOR
LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION.

BUCKNER-SUPERIOR 3300 2"
NORMALLY OPEN BRASS MASTER VALVE THAT PROVIDES
DIRTY WATER PROTECTION AND NO MINIMUM FLOW
FEATURE, WHICH ENSURES RELIABLE OPENING AND
CLOSING OF THE VALVE IN EXTREME HIGH OR LOW FLOW
SCENARIOS. AVAILABLE IN 1-1/2", 2", 2-1/2" AND 3".

MANUFACTURER/MODEL/DESCRIPTION

TYP. TREE LAYOUT EVERY SPACE

ZURN 975XL2 2"
REDUCED PRESSURE BACKFLOW DEVICE: 2" ZURN 975XL2
INSTALL IN STRONG BOX SBBC-45CR LOW PROFILE

ENCLOSURE AND WITH POLAR BEARIER INSULATED COVER, MODEL PBB-45. CONTRACTOR SHALL BE RESPONSIBLE TO CERTIFY BACKFLOW PREVENTER WITHIN SEVEN (7) DAYS OF INSTALLATION. LOCATION SHOWN FOR GRAPHIC CLARITY. CONTRACTOR SHALL LOCATE BACKFLOW FOR LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION. LOCATE WITHIN PLANTER. SEE DETAIL.

HUNTER A2C-75D-M
75-STATION DECODER CONTROLLER IN AN OUTDOOR GRAY
METAL WALL MOUNT ENCLOSURE.

HUNTER HFS-200 FLOW SENSOR FOR USE WITH ACC CONTROLLER, 2IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP. WATER METER 3"

IRRIGATION LATERAL LINE: PVC SCHEDULE 40

IRRIGATION MAINLINE: PVC SCHEDULE 40

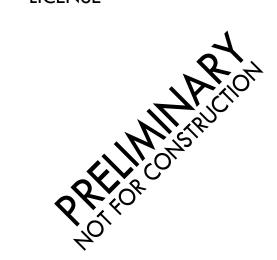
Valve Number Valve Flow

Valve Size

NORTH

0 40 SCALE: 1" = 40' 820 BROADWAY ST. CHICO, CA 95928 (530) 899-1616 meltondg.com

LICENSE



CONSULTANT

CLIENT

WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

IRRIGATION PLAN

DATES

NO. DESCRIPTION DATE

1.
2.
3.
4.
5.

PLOT DATE:

PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

L3.

SHEET ____ OF ___

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30 203 - 11.

REQUIRED.

1. THIS SYSTEM IS DESIGNED FOR A MAXIMUM DEMAND OF 34 GPM AND 55 PSI AT POINT OF CONNECTION WITH A 12-HOUR WATER WINDOW. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY EXISTING CONDITIONS. COORDINATE WITH OWNER TO REVIEW IRRIGATION SYSTEM PRIOR TO START OF WORK. IN THE EVENT THAT EXISTING CONDITIONS ARE DIFFERENT THAN STATED, CONTACT LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.

2. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROGRAM THE IRRIGATION CONTROLLER BASED ON RECOMMENDATIONS FROM THE LANDSCAPE WATER AUDIT AND AS REQUIRED BY THE 2015 UPDATED MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, CALIFORNIA CODE OF REGULATIONS TITLE 23, DIVISION 2, CHAPTER 2.7 AND EXISTING FIELD CONDITIONS. THE CONTRACTOR SHALL MAKE SCHEDULING ADJUSTMENTS AS NEEDED TO ACHIEVE THE MOST EFFICIENT APPLICATION OF WATER BASED ON PLANT TYPE, WATER USE REQUIREMENTS, SOIL TYPE, GRADES, SUN EXPOSURE, SHADE, WIND, ETC.

3. THIS DRAWING IS DIAGRAMMATIC. IRRIGATION COMPONENTS SHOWN BENEATH PAVING, UTILITIES, PLANTINGS, ETC. ARE FOR GRAPHIC CLARITY ONLY. PLACE ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS WITHIN THE ADJACENT PLANTER EXCEPT WHERE PIPES CROSSOVER BENEATH PAVING, STRUCTURES, WALLS, ETC.. THE CONTRACTOR SHALL PLACE PIPING TO PREVENT CONFLICT WITH UTILITIES, TREE LOCATIONS, PLANTING, HARDSCAPE COMPONENTS, WATER PLAY FEATURES, PLAY AREAS AND FURNISHINGS. SEE PLANTING PLAN FOR PLANT COUNT AND

LAYOUT. REFER TO CONTRACT DOCUMENTS FOR PROJECT SCOPE.

4. THE CONTRACTOR SHALL PROVIDE COMPLETE RECORD DRAWINGS TO OWNER AT COMPLETION OF PROJECT AND AS REQUIRED BY CONTRACT DOCUMENTS.

5. THE IRRIGATION SYSTEM IS DESIGNED TO OPERATE AT THE FOLLOWING PRESSURES: HUNTER 120 ROTORS-25PSI, DRIP TREE AND SHRUB RINGS-25PSI, DRIPPER LINE - 25PSI. ALL IRRIGATION SHALL BE INSTALLED BY CONTRACTOR AT THE LOCATIONS INDICATED ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF CONTRACTOR TO NOTIFY LANDSCAPE ARCHITECT OF ANY DEVIATION WHICH MAY

6. TRENCH IRRIGATION MAIN LINES TO A DEPTH OF 24". TRENCH ROTOR LINES TO A DEPTH OF 18", TRENCH DRIP LINES TO A DEPTH OF 2"-4". TRENCH ALL MAIN AND LATERAL LINES TO A DEPTH OF 24" WHERE CROSSING BENEATH PAVEMENT AND PLACE WITHIN SLEEVE, SIZE AND TYPE PER PLAN. SLEEVE CONTROL AND COMMON WIRES SEPARATELY IN 3" PVC SCHEDULE 40 CONDUIT ALONG ENTIRE LENGTH AND WHEN CROSSING BENEATH PAVEMENT AS

AFFECT THE SPACING OR LOCATION OF THE IRRIGATION LAYOUT.

7. CONTRACTOR SHALL BE RESPONSIBLE TO SLEEVE ALL MAIN LINES AND LATERAL LINES WHEN CROSSING BENEATH PAVEMENT, WALKWAYS, BUILDINGS, WALLS, ETC. WHETHER OR NOT SHOWN ON THE IRRIGATION PLAN. SIZE PER PLAN AND/OR AS NEEDED BASED ON THE NUMBER OF IRRIGATION LINES AND SIZES. CONTROL WIRES SHALL BE SLEEVED INDEPENDENTLY. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH OTHER TRADES TO INSTALL SLEEVES REQUIRED.

8. ALL IRRIGATION REMOTE CONTROL VALVES, QUICK COUPLER VALVES, ELECTRIC PULL BOXES SHALL BE INSTALLED IN PLANTED AREAS AND IN VALVE BOXES. NO VALVES/VALVE BOXES SHALL BE INSTALLED IN PAVED AREAS OR IN TURF AREAS. VALVE BOXES SHALL

9. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONNECT THE NEW IRRIGATION CONTROLLER TO 110V POWER AND BE RESPONSIBLE TO COORDINATE WITH OTHERS. PROVIDE OWNER TRAINING ON CONTROLLER SCHEDULING FOR BOTH ESTABLISHMENT AND MAINTENANCE SCHEDULES.

10. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A COMPLETE LANDSCAPE WATER AUDIT PER REQUIREMENTS SET FORTH IN THE 2015 UPDATED MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, CALIFORNIA CODE OF REGULATIONS TITLE 23, DIVISION 2, CHAPTER 2.7. CONTRACTOR SHALL MAKE FINAL ADJUSTMENTS TO THE IRRIGATION SYSTEM BASED ON LANDSCAPE WATER AUDIT RECOMMENDATIONS. SEE CONTRACT DOCUMENTS.

11. MAIN LINE PIPE SIZE TO BE 3" PIPE. LATERAL PIPE SIZE DOWNSTREAM OF LAST PIPE SIZE CALL OUT TO BE 1" PIPE.

12. SEE CONTRACT DOCUMENTS, SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.

REDUCED PRESSURE BACKFLOW DEVICE: 2" ZURN 975XL2 HUNTER MP2000 PROS-04-PRS40-CV K INSTALL IN STRONG BOX SBBC-45CR LOW PROFILE ENCLOSURE AND WITH POLAR BEARIER INSULATED COVER, HUNTER MP3000 PROS-04-PRS40-CV Y MODEL PBB-45. CONTRACTOR SHALL BE RESPONSIBLE TO HUNTER MP3500 PROS-04-PRS40-CV LB 90-210 55 35 MANUFACTURER/MODEL/DESCRIPTION HUNTER ICZ-151-XL-40 DRIP CONTROL ZONE KIT. 1-1/2IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 40PSI. FLOW RANGE: 20 GPM TO 60 GPM. 120 MESH STAINLESS STEEL SCREEN. 1-1/2IN. INLET X SINGLE 2IN. OUTLET DRIP TREE RING HUNTER HDL-06-12-CV: PRESSURE COMPENSATING HUNTER DRIPLINE WITH 0.6 GPH FLOW. LIGHT BROWN TUBING WITH GRAY STRIPING. APPROXIMATELY (33) EMITTERS X 0.60 GPH AT 12" O/C SPACING = 0.33 GPM, PLUS (1) ADJUSTABLE FLOW BUBBLER TO ROOT BALL. SEE DETAIL FOR RING DIAMETERS AND LAYOUT. MANUFACTURER/MODEL/DESCRIPTION **HUNTER ICV-G** 1IN., 1-1/2IN., 2IN., AND 3IN. PLASTIC ELECTRIC REMOTE

Valve Flow Valve Size

WESTERN CARE CONSTRUCTION

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CHICO, CA 95928

(530) 899-1616

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LICENSE

CONSULTANT

COMPANY, INC.

PROJECT

CLIENT

OROVILLE RV PARK

SHEET TITLE

IRRIGATION PLAN

DATES

NO. DESCRIPTION

PLOT DATE: --

PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

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IRRIGATION SCHEDULE

MANUFACTURER/MODEL PSI GPM RADIUS

CONTROL VALVES, GLOBE CONFIGURATION, WITH NPT

ISOLATION VALVE

BUCKNER-SUPERIOR 3300 2"

THREADED INLET/OUTLET, FOR COMMERCIAL/MUNICIPAL

ISOLATION VALVE - 2" AND SMALLER - WILKINS 850-XL FULL

619-RW-SON FLANGED GATE VALVE WITH SQ. OP. NUT. SIZE

LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION.

PORT BRONZE BALL VALVE. 2-1/2" AND LARGER - NIBCO

PER PIPE SIZE. LOCATION SHOWN FOR GRAPHIC CLARITY.

NORMALLY OPEN BRASS MASTER VALVE THAT PROVIDES

CLOSING OF THE VALVE IN EXTREME HIGH OR LOW FLOW

DIRTY WATER PROTECTION AND NO MINIMUM FLOW

FEATURE, WHICH ENSURES RELIABLE OPENING AND

SCENARIOS. AVAILABLE IN 1-1/2", 2", 2-1/2" AND 3".

INSTALL IN PLANTER. CONTRACTOR SHALL LOCATE FOR

CERTIFY BACKFLOW PREVENTER WITHIN SEVEN (7) DAYS OF INSTALLATION. LOCATION SHOWN FOR GRAPHIC CLARITY. CONTRACTOR SHALL LOCATE BACKFLOW FOR LANDSCAPE ARCHITECT APPROVAL PRIOR TO INSTALLATION. LOCATE WITHIN PLANTER. SEE DETAIL. HUNTER A2C-75D-M

75-STATION DECODER CONTROLLER IN AN OUTDOOR GRAY METAL WALL MOUNT ENCLOSURE. **HUNTER HFS-200**

MANUFACTURER/MODEL/DESCRIPTION

ZURN 975XL2 2"

FLOW SENSOR FOR USE WITH ACC CONTROLLER, 2IN. SCHEDULE 40 SENSOR BODY, 24 VAC, 2 AMP. WATER METER 3"

IRRIGATION LATERAL LINE: PVC SCHEDULE 40

IRRIGATION MAINLINE: PVC SCHEDULE 40

NORTH

SCALE: 1'' = 40'

REQUIRED.

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WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

E-105

E-103

LIGHTING PLAN

NO. DESCRIPTION DATE

SHEET TITLE

DATES

REFERENCE NOTES SCHEDULE

E-101

E-104

E-106

E-102

ELECTRICAL DESCRIPTION QTY DETAIL

E-101 EXTERIOR POLE LIGHT

E-102 EXTERIOR POLE DOUBLE LIGHT

E-103 EXTERIOR BOLLARD LIGHT

E-104 LED STRAND LIGHTS, BY ARCHITECT

E-105 LANDSCAPE UP-LIGHT

E-106 EXTERIOR WALL LIGHT

NORTH

0 40 80

SCALE: 1" = 40'

PROJECT NUMBERS

PLOT DATE: --

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

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240.09 240.48 REBAR MON?

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AM FILE NAME: G:\MDG(2500-2599)\2544 Oroville RV Resort\2544 CAD\CDs\SHE

PLOT DATE: August 31, 2023 - 12:09 AM

E-105

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E-103

PRI HORONSTRUCTION

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PROJECT

OROVILLE RV PARK

SHEET TITLE

DATES

LIGHTING PLAN

NO. DESCRIPTION DATE

REFERENCE NOTES SCHEDULE

SYMBOL ELECTRICAL DESCRIPTION QTY DETAIL

E-101 EXTERIOR POLE LIGHT

E-102 EXTERIOR POLE DOUBLE LIGHT

E-103 EXTERIOR BOLLARD LIGHT

E-104 LED STRAND LIGHTS, BY ARCHITECT

E-105 LANDSCAPE UP-LIGHT

E-106 EXTERIOR WALL LIGHT

NORTH 0 40 80

SCALE: 1" = 40'

PROJECT NUMBERS

PLOT DATE: --

MELTON DESIGN GROUP: 2544
CONSULTANT PROJECT #: --

SHEET NUMBER

L4.1

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236.74 IP

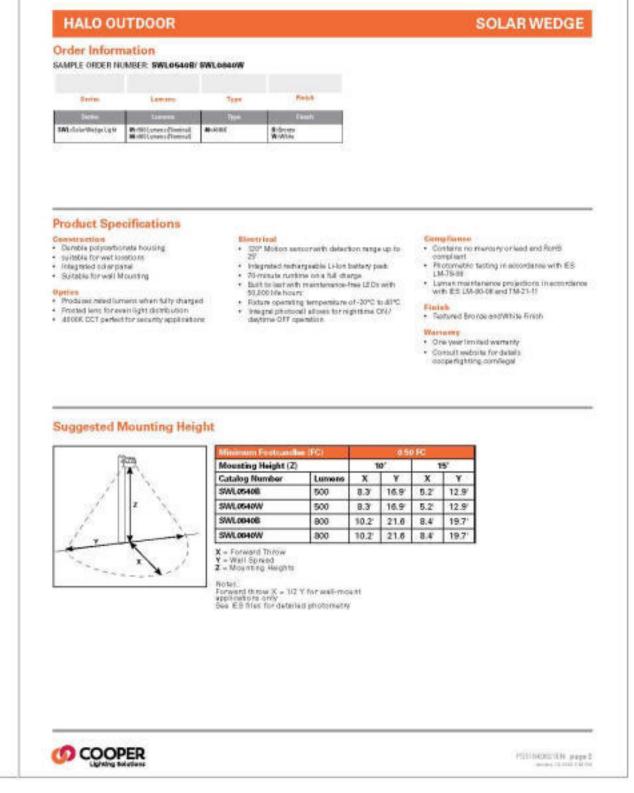
WASH HOUSE

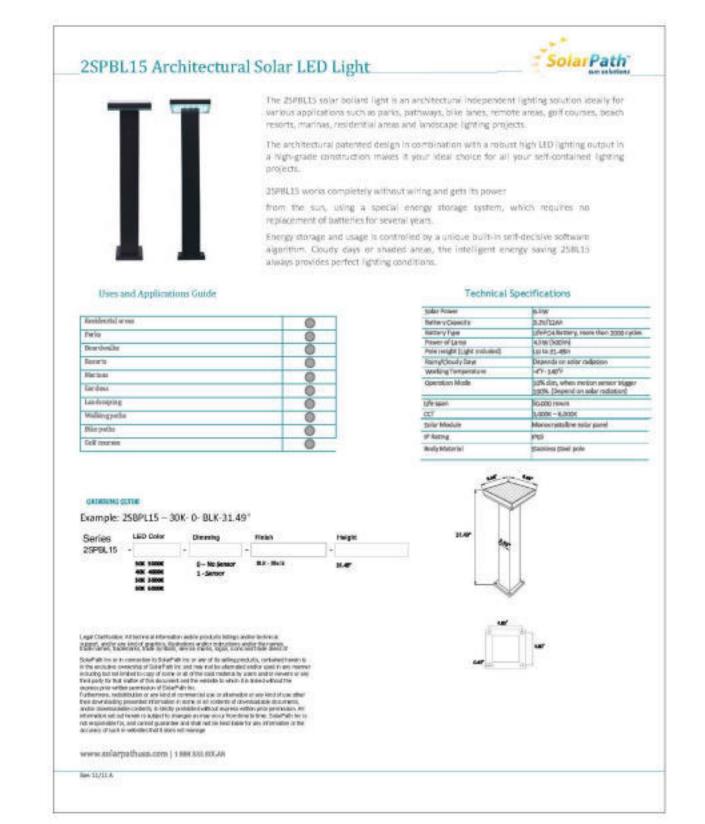
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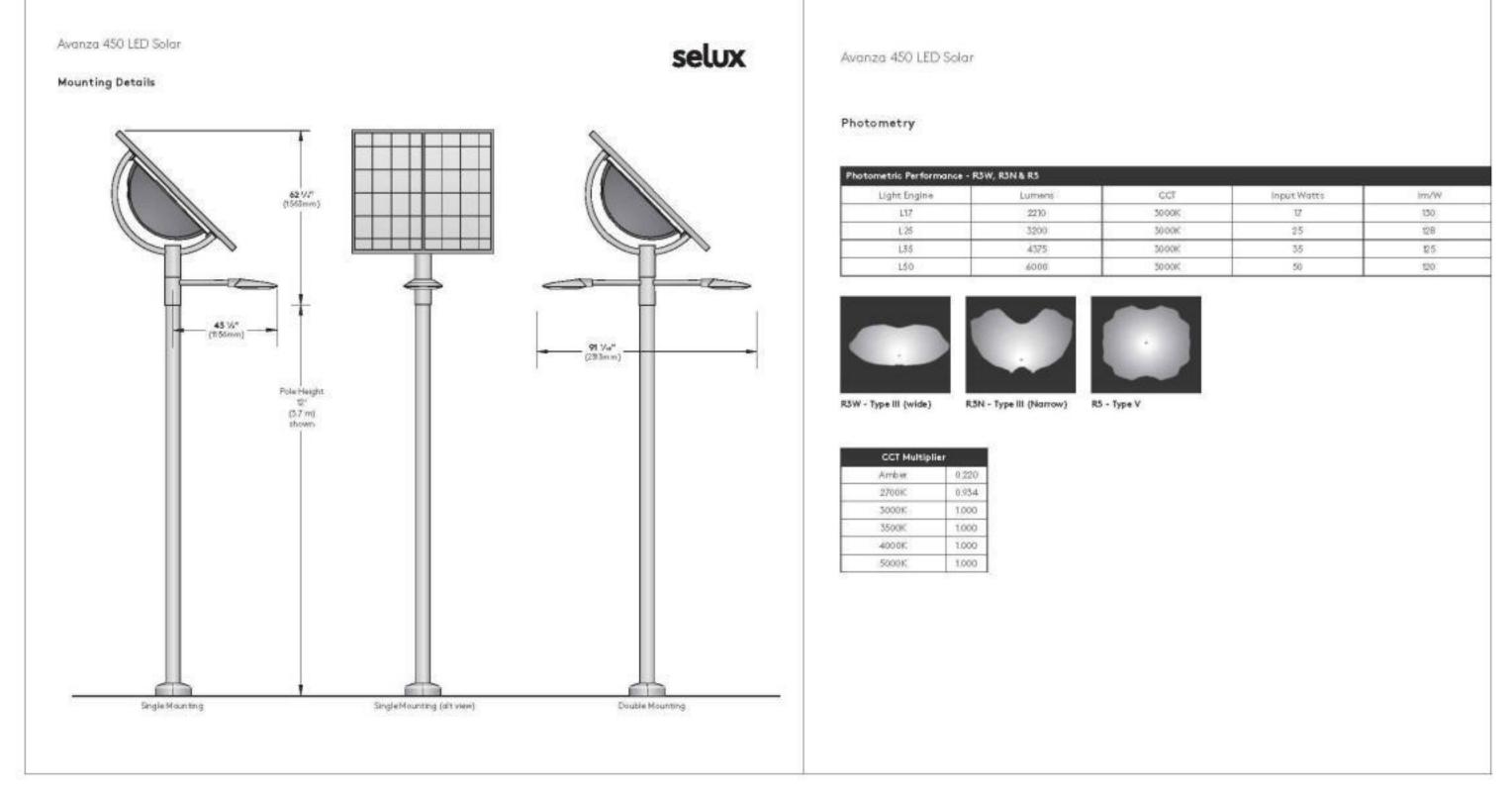
WELCOME CENTER & STORE

FILE NAME: G: (MDG(2500-2344)/2544 Oroville RV Resort (2544 CAD (CDS) SHEELS)

HALO OUTDOOR SOLAR WEDGE





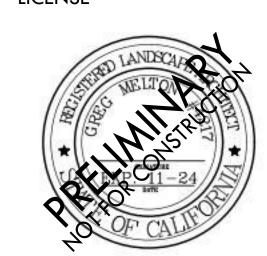




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CONSULTANT

ARCHITECTURAL SOLAR LED LIGHT

AVANZA 450 LED SOLAR

SHEET NTS









CLIENT

WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

ELECTRICAL DETAILS

DATES

NO. DESCRIPTION

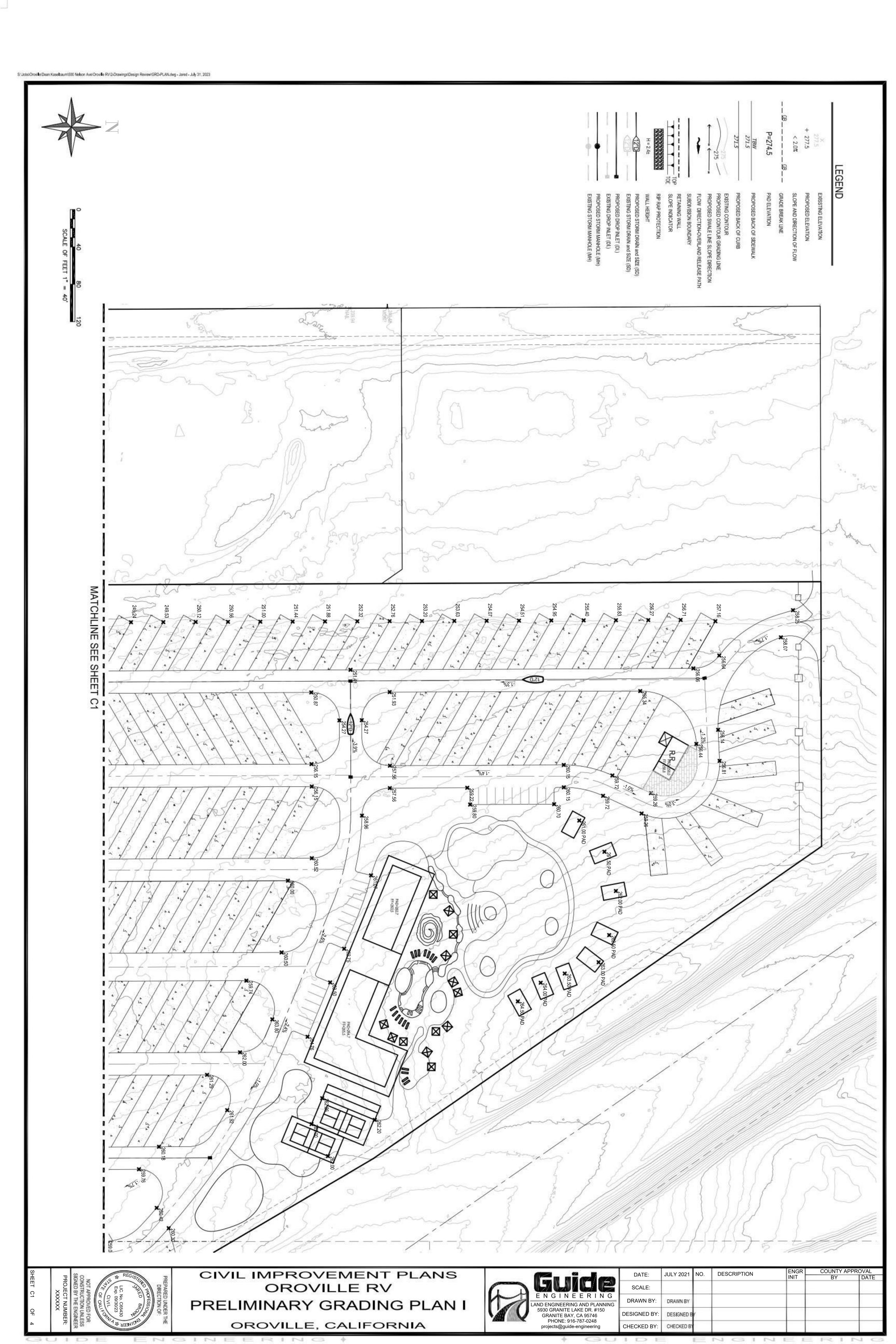
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PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

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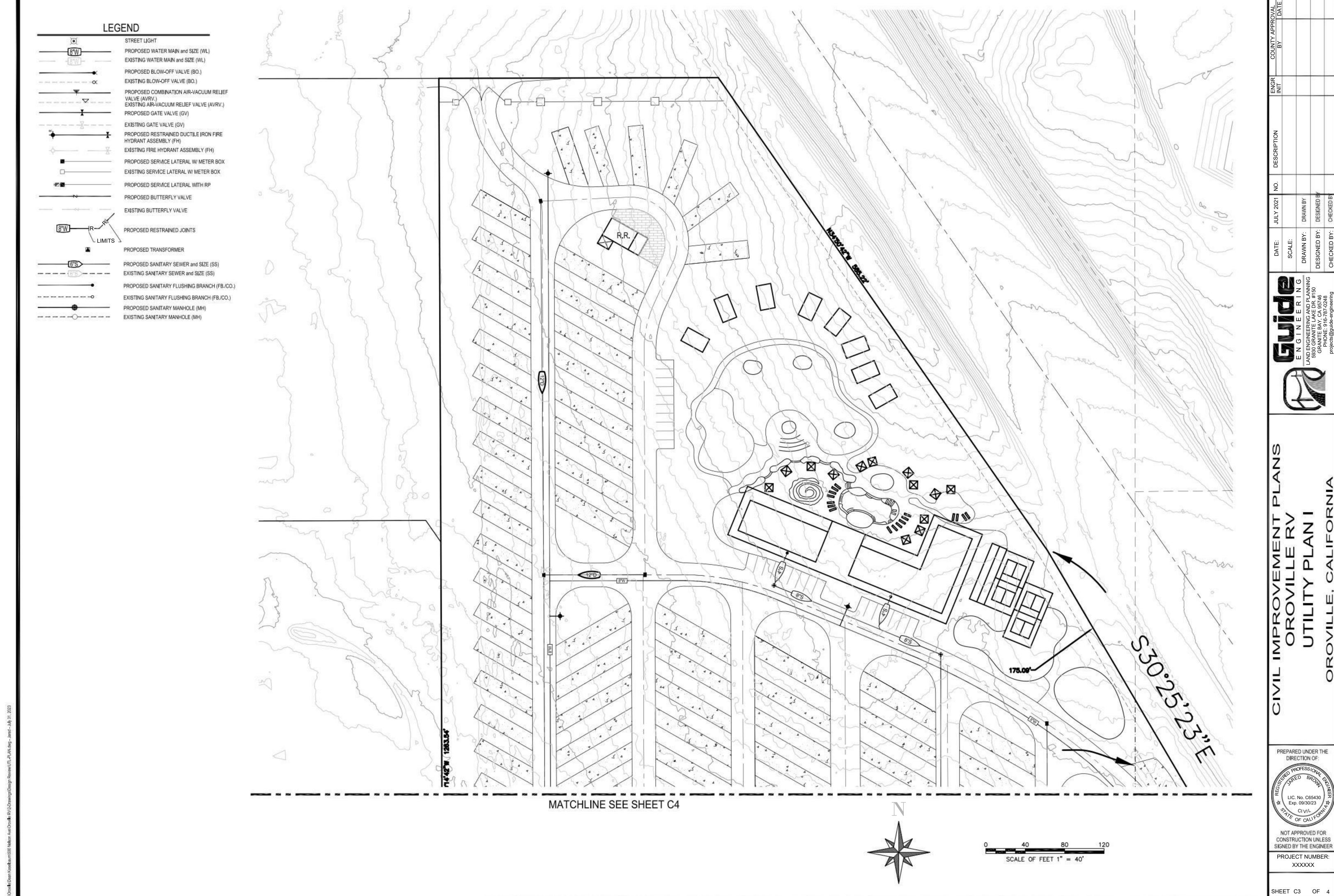
OROVILLE, CALIFORNIA

DESIGNED BY:

CHECKED BY:

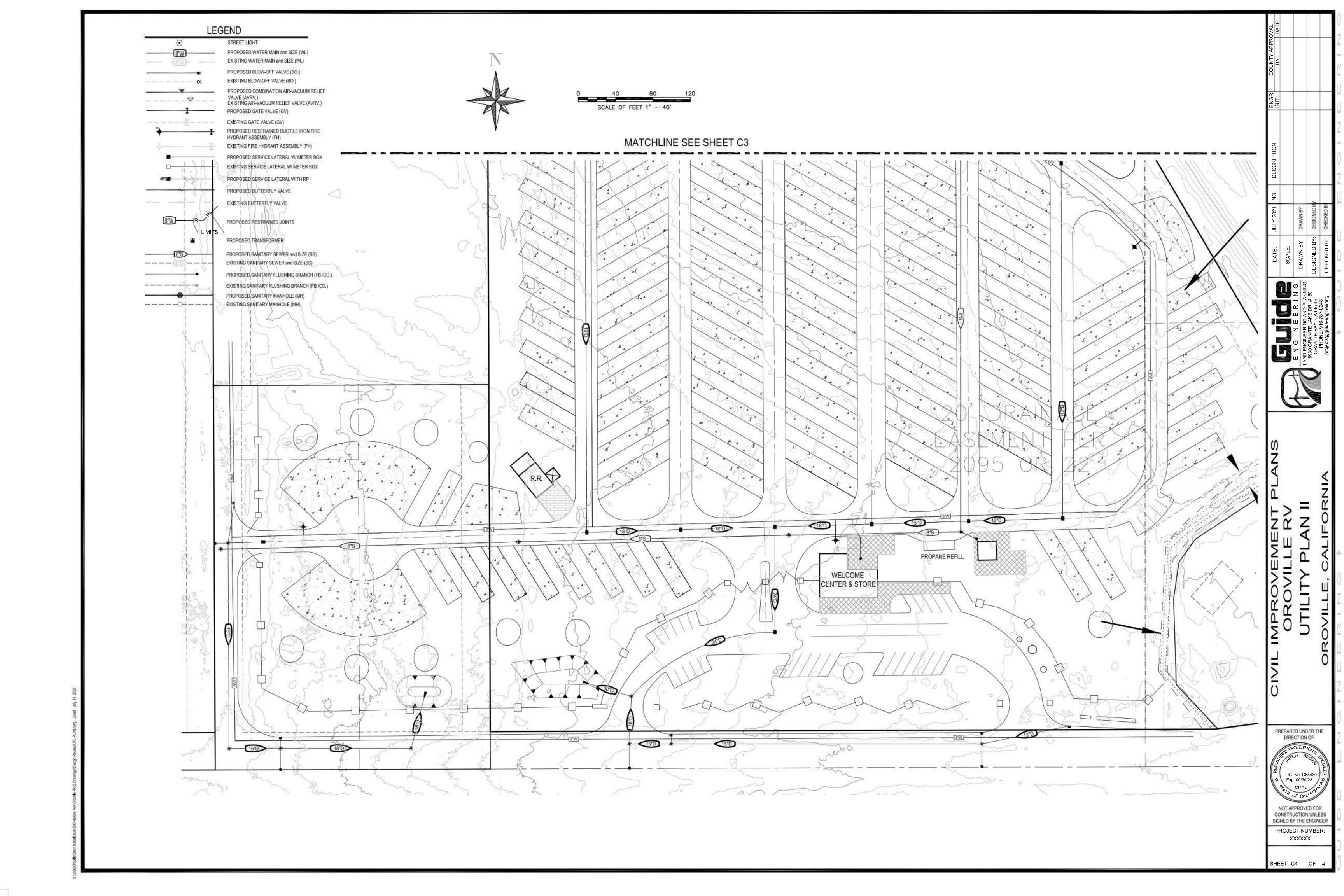
DESIGNED B

CHECKED B



PREPARED UNDER THE DIRECTION OF: LIC. No. C65430 Exp. 09/30/23

NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED BY THE ENGINEER PROJECT NUMBER:



820 BROADWAY ST.

LICENSE



CONSULTANT



- A COMPOSITE SIDING
- B CORRUGATED STEEL
- C STUCCO PANELS
- D STRUCTURAL I BEAM / AWNING

STRUCTURE TYPE & SF

FITNESS CENTER & RESTROOMS

STRUCTURE TYPE

TOTAL

BANQUET HALL INTERIOR

EXTERIOR COVERED AREA

EXTERIOR COVERED ENTRY

TOTAL (COVERED GROSS SF)

MAIN CLUBHOUSE AREA

- E GLASS SWING DOOR
- F CLERESTORY WINDOWS
- G SLIDING WINDOWS H FRENCH OR ROLL-UP DOORS
- I GREEN ROOF SYSTEM
- J LOCAL STONE
- K BOARD AND BATTEN SIDING L STEEL TRELLIS FENCE / GATE
- M STANDING SEAM METAL ROOF
- N MAN DOOR

FINISH & COLOR

GROSS SF

= 1,344 SF

= 2,604 SF

= 1,900 SF

= 5,848 SF

= 1,890 SF

= 1,260 SF

= 3,150 SF

HORIZONTAL

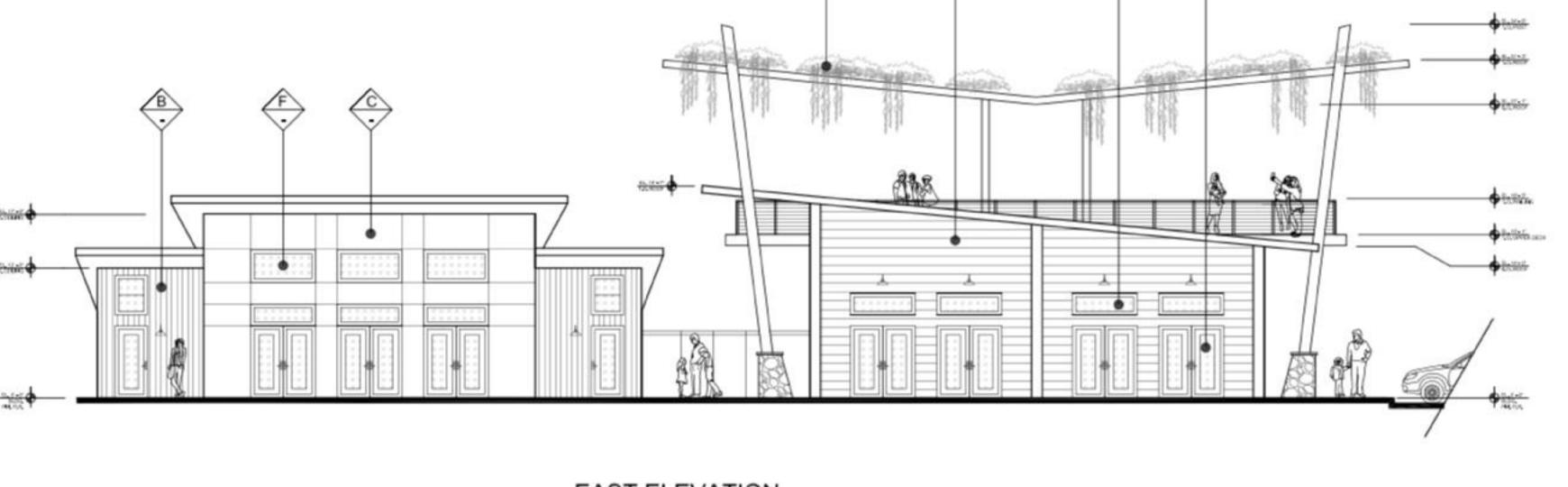
VERTICAL OR HORIZONTAL SANTA BARBARA

1000

WEATHERED & SEALED BLACK AB-8

BLACK AB-8

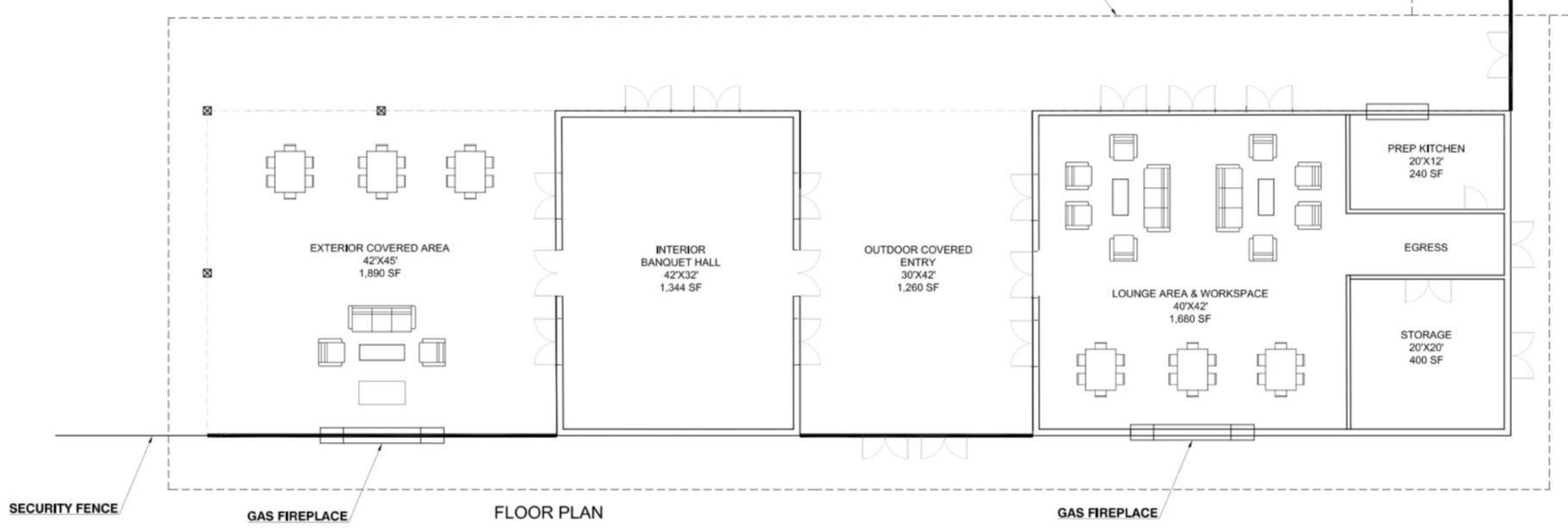
CLEAR SEAL



EAST ELEVATION 0000000 STORAGE SCALE: 1 = 1'-0" **ROOF OVERHANG** RESTROOM 100 SF 10'X28' 280 SF

SOUTH ELEVATION

SCALE: \frac{1}{8}" = 1'-0"



SCALE: 1/8" = 1'-0"

CLIENT

SECURITY FENCE

STORAGE

1 1 1

ROOF OVERHANG

RESTROOM

10'X28'

WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

CLUBHOUSE FLOOR PLAN & ELEVATIONS

DATES

NO. DESCRIPTION

PLOT DATE: ..

PROJECT NUMBERS

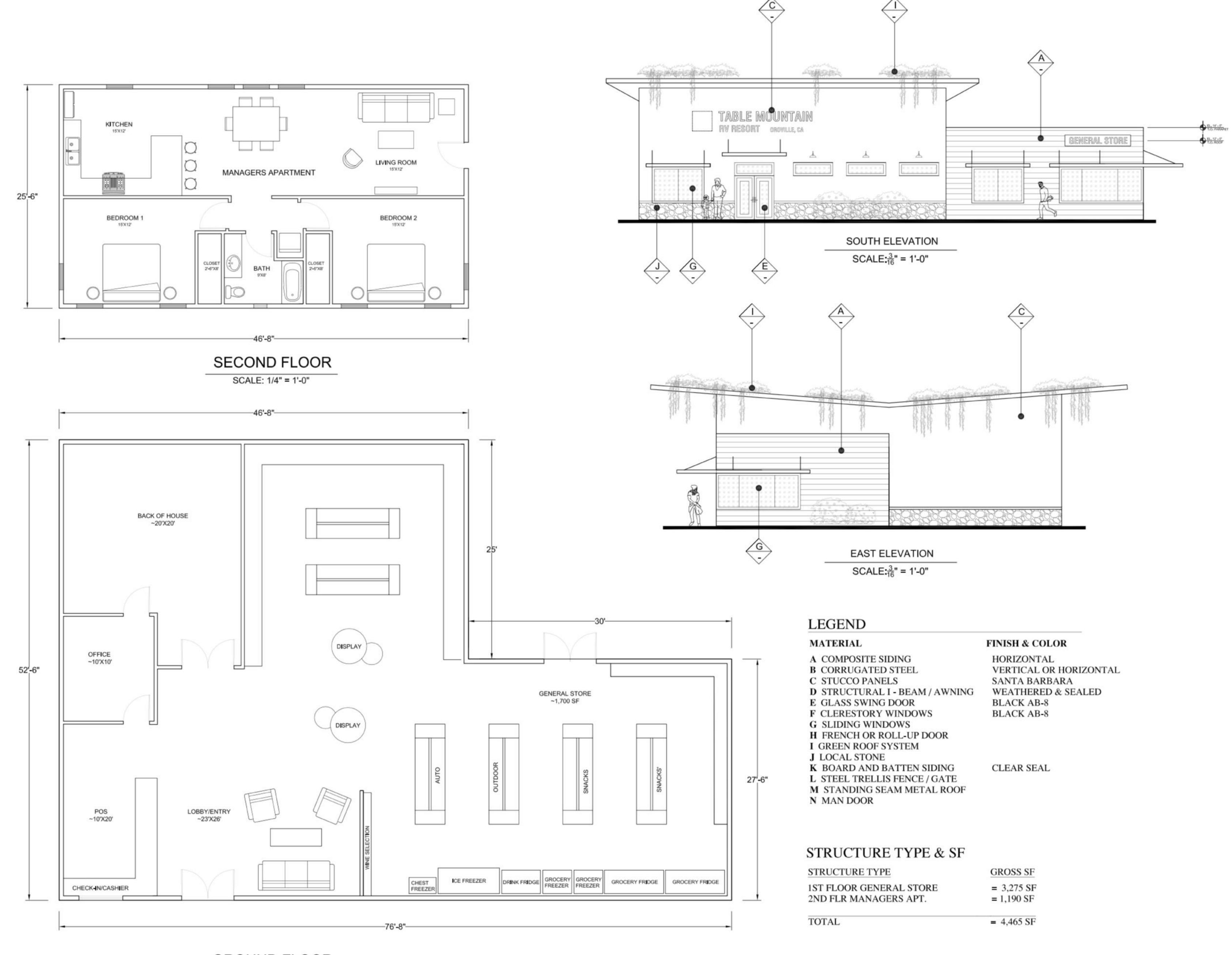
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GROUND FLOOR SCALE: 1/4" = 1'-0"



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PROJECT

OROVILLE RV PARK

SHEET TITLE

WELCOME CENTER FLOOR PLAN & ELEVATIONS

DATES

NO. DESCRIPTION DATE

1.
2.
3.
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PLOT DATE: ..

PROJECT NUMBERS

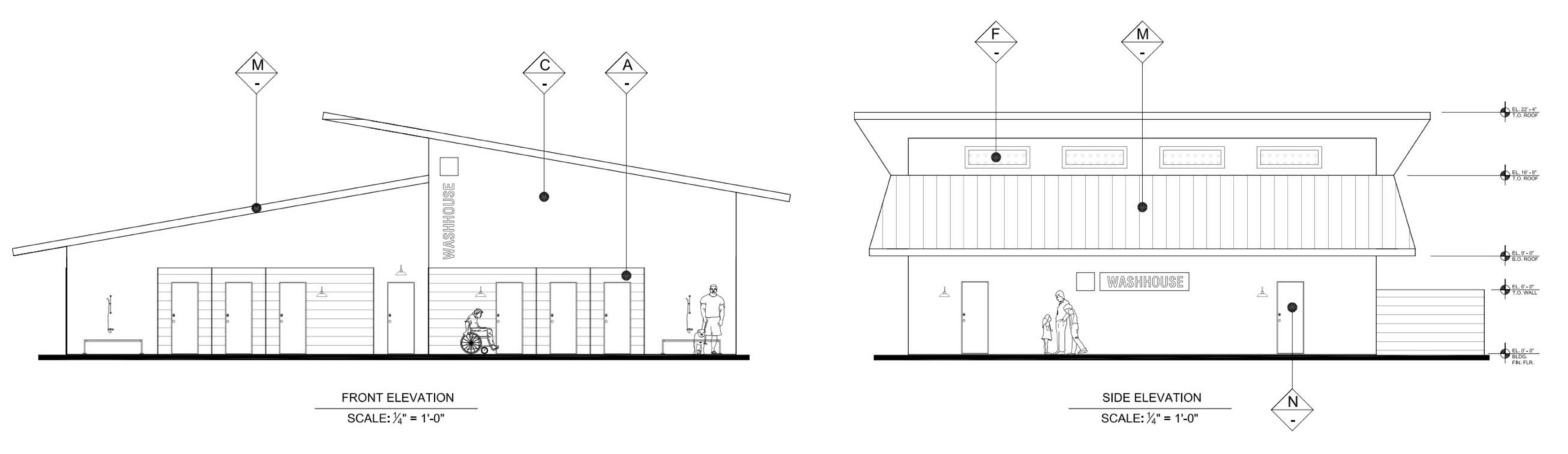
MELTON DESIGN GROUP: 2544
CONSULTANT PROJECT #: --

SHEET NUMBER

A2.0

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LEGEND

MATERIAL

A COMPOSITE SIDING B CORRUGATED STEEL

C STUCCO PANELS D STRUCTURAL I - BEAM / AWNING

E GLASS SWING DOOR

F CLERESTORY WINDOWS G SLIDING WINDOWS

H FRENCH OR ROLL-UP DOOR

I GREEN ROOF SYSTEM J LOCAL STONE

K BOARD AND BATTEN SIDING

L STEEL TRELLIS FENCE / GATE

M STANDING SEAM METAL ROOF

N MAN DOOR

HORIZONTAL

FINISH & COLOR

VERTICAL OR HORIZONTAL

SANTA BARBARA

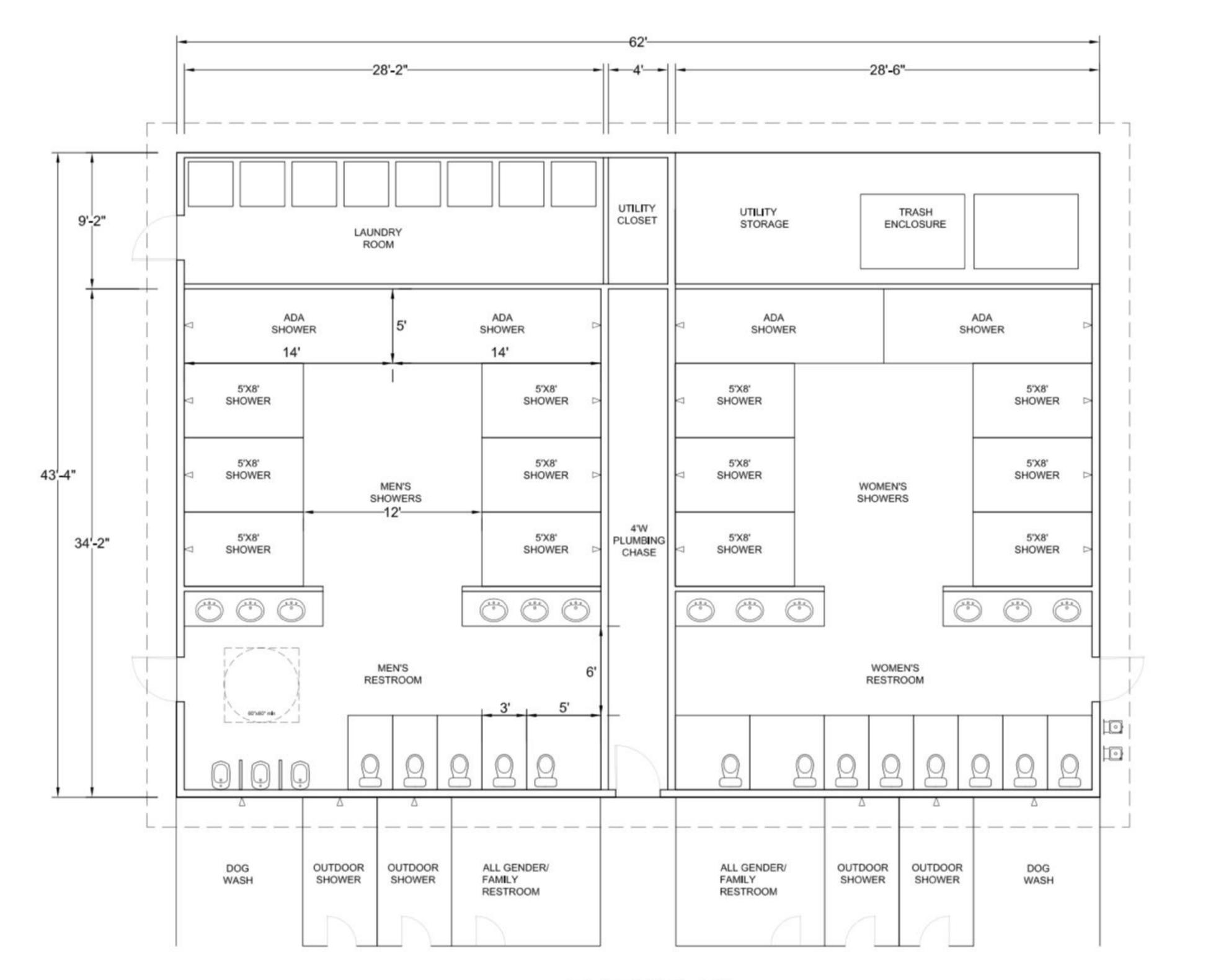
WEATHERED & SEALED BLACK AB-8

BLACK AB-8

CLEAR SEAL

STRUCTURE TYPE & SF

STRUCTURE TYPE	GROSS SF
MEN'S RESTROOM	= 952 SF
WOMEN'S RESTROOM	= 952 SF
LAUNDRY ROOM	= 252 SF
UTILITY STORAGE	= 252 SF
UTILITY CLOSET	= 36 SF
PLUMBING CHASE	= 136 SF
TOTAL	= 2,688 SF



FLOOR PLAN

SCALE: 1/8" = 1'-0"



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WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

WASHHOUSE FLOOR PLAN & ELEVATIONS

DATES

NO. DESCRIPTION

PLOT DATE: ..

PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

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MATERIAL

A COMPOSITE SIDING

B CORRUGATED STEEL

C STUCCO PANELS

D STRUCTURAL I - BEAM / AWNING

E GLASS SWING DOOR

F CLERESTORY WINDOWS

G SLIDING WINDOWS

H FRENCH OR ROLL-UP DOOR

I GREEN ROOF SYSTEM

J LOCAL STONE

K BOARD AND BATTEN SIDING

L STEEL TRELLIS FENCE / GATE
M STANDING SEAM METAL ROOF

N MAN DOOR

FINISH & COLOR

HORIZONTAL VERTICAL OR HORIZONTAL SANTA BARBARA WEATHERED & SEALED

BLACK AB-8 BLACK AB-8

CLEAR SEAL

STRUCTURE TYPE & SF

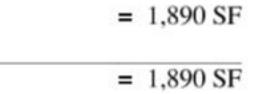
STRUCTURE TYPE GROSS SF

MAINTENANCE SHOP = 900 SF

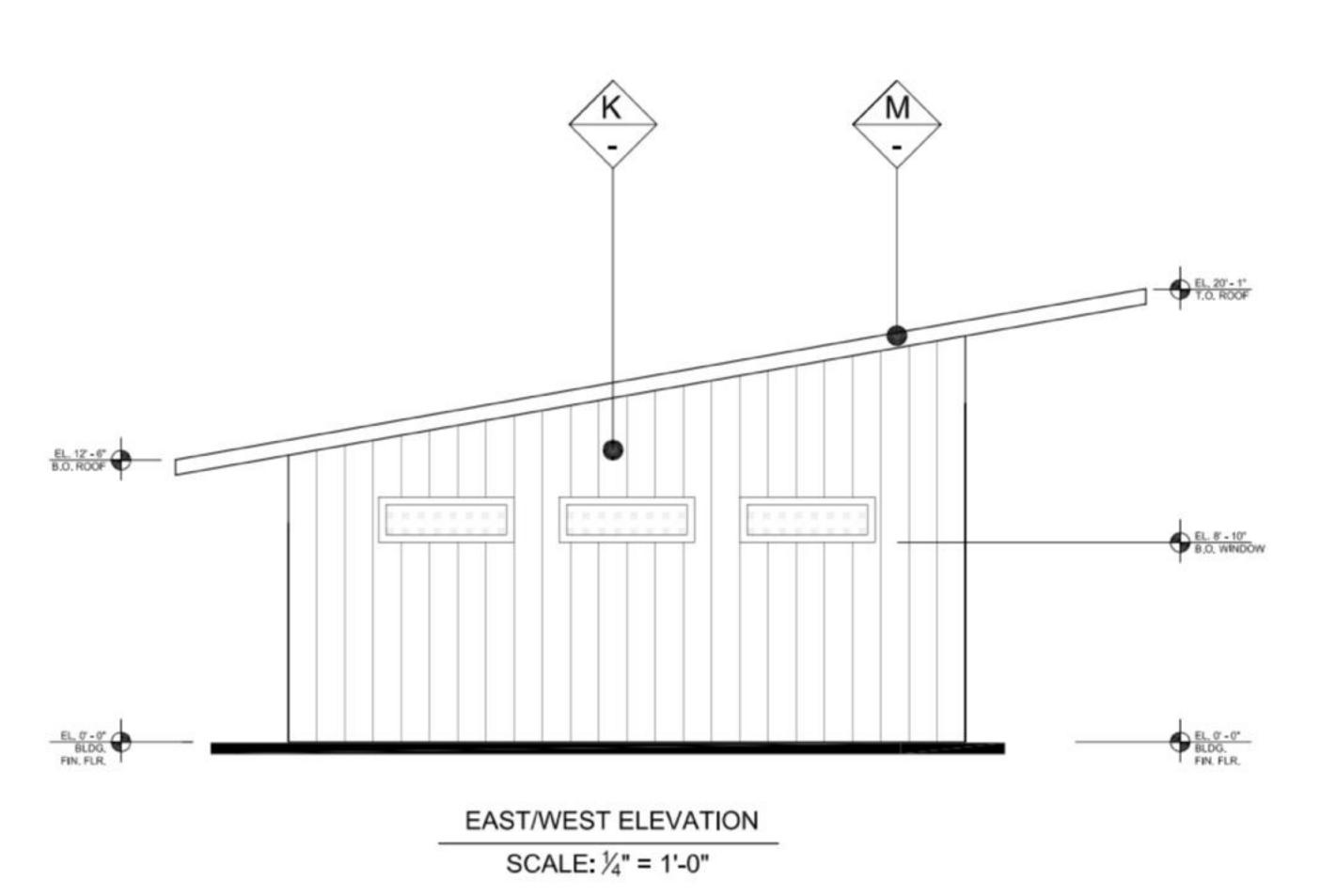
TOTAL

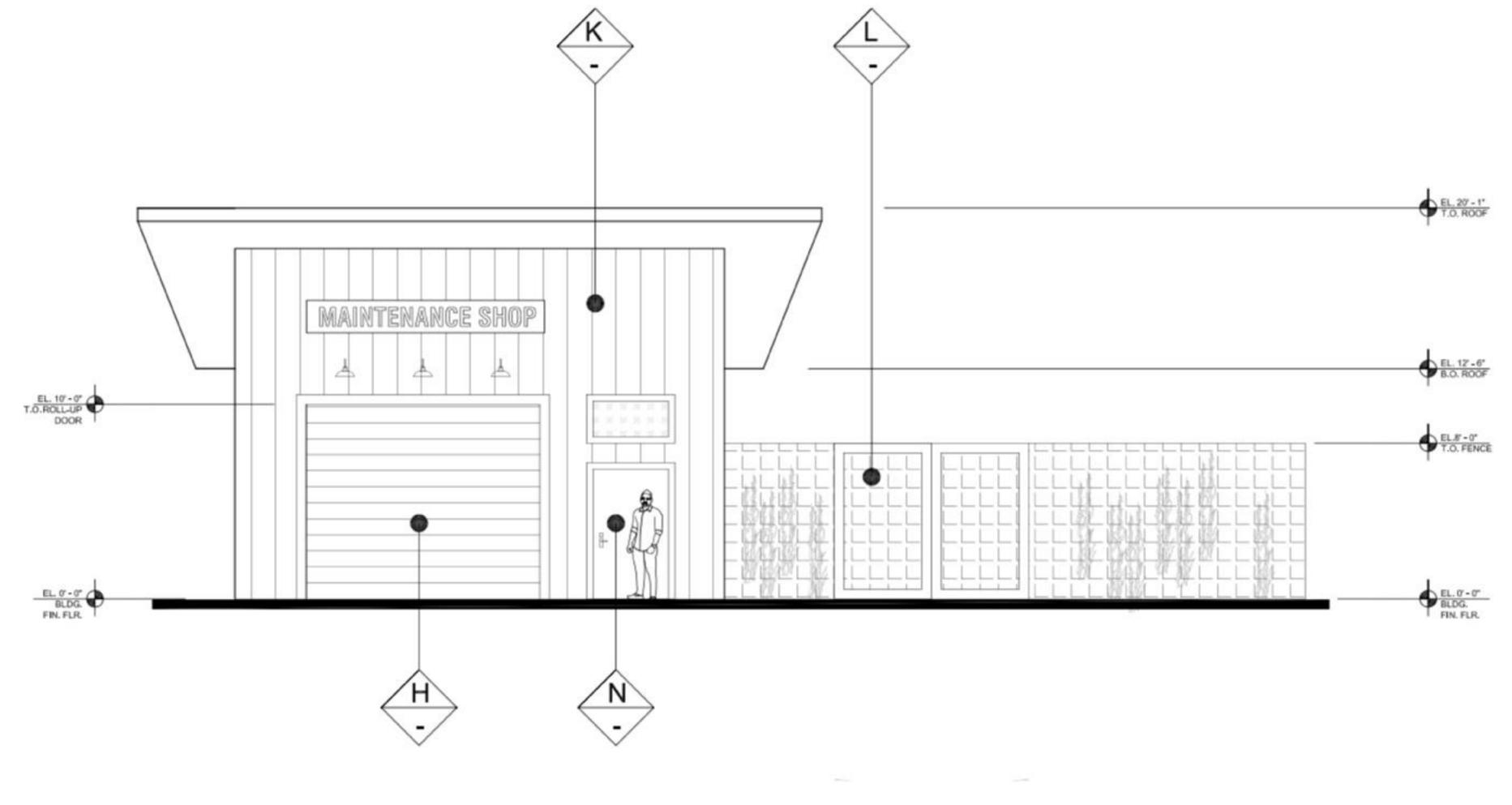
EXTERIOR MATERIALS YARD

TOTAL (EXTERIOR GROSS SF) = 1,89

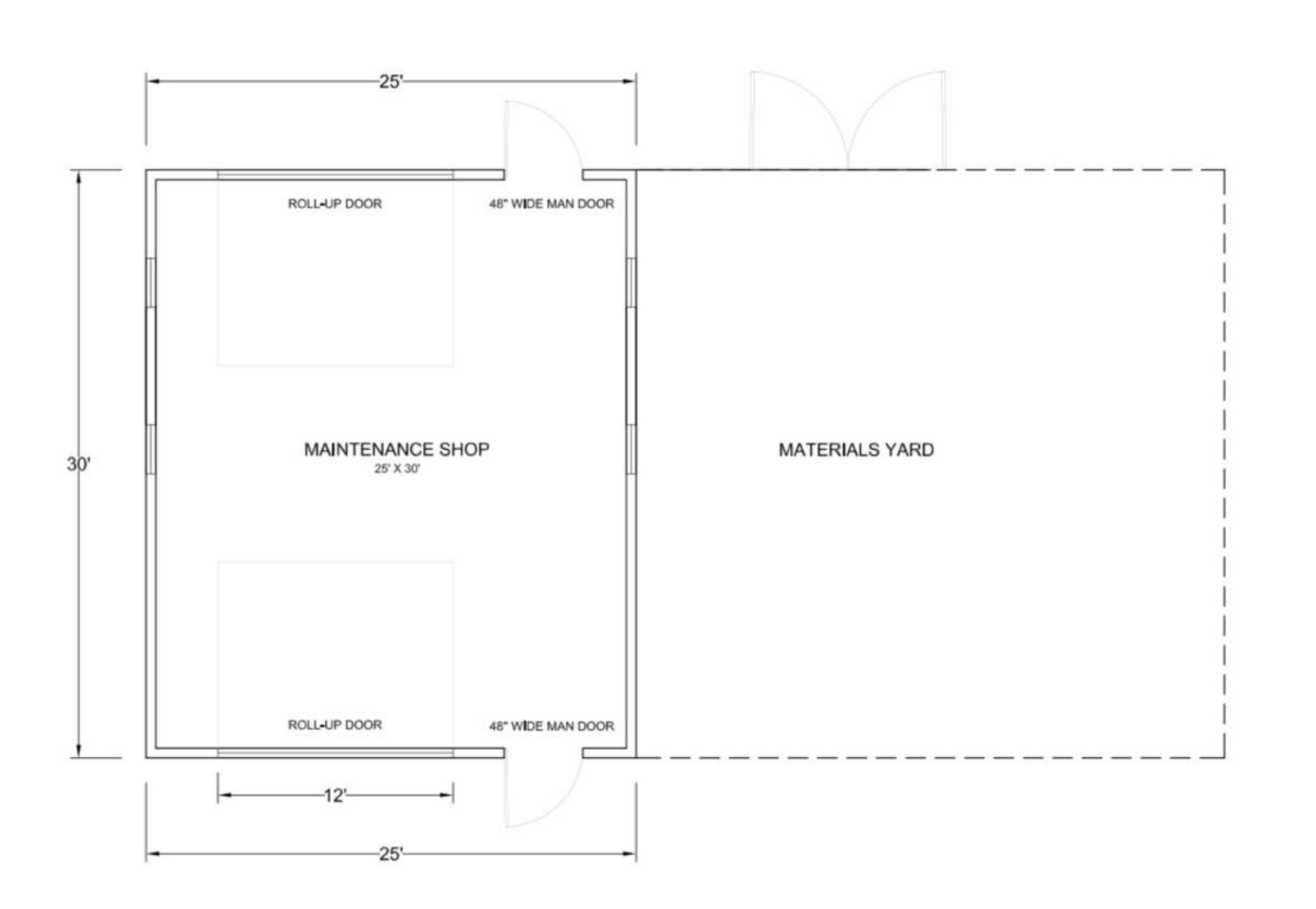


= 900 SF





NORTH ELEVATION SCALE: 1/4" = 1'-0"



FLOOR PLAN

SCALE: 1/4" = 1'-0"



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WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV PARK

SHEET TITLE

MAINTENANCE SHOP FLOOR PLAN & ELEVATIONS

DATES

NO. DESCRIPTION DATE

1.
2.
3.
4.
5.

PLOT DATE: ..

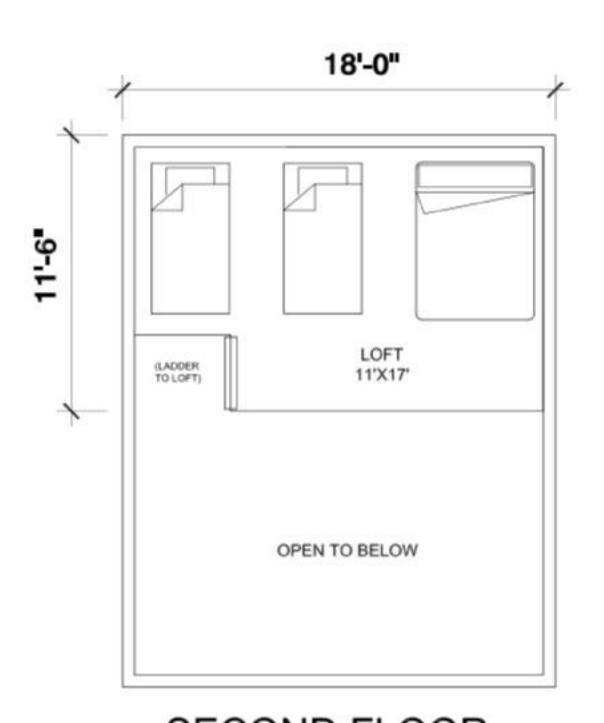
PROJECT NUMBERS

MELTON DESIGN GROUP: 2544
CONSULTANT PROJECT #: --

SHEET NUMBER

A4.0

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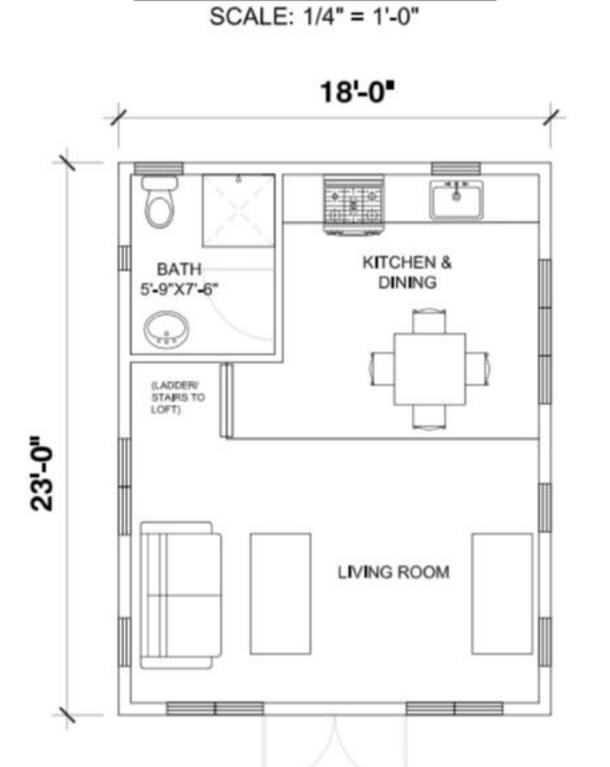


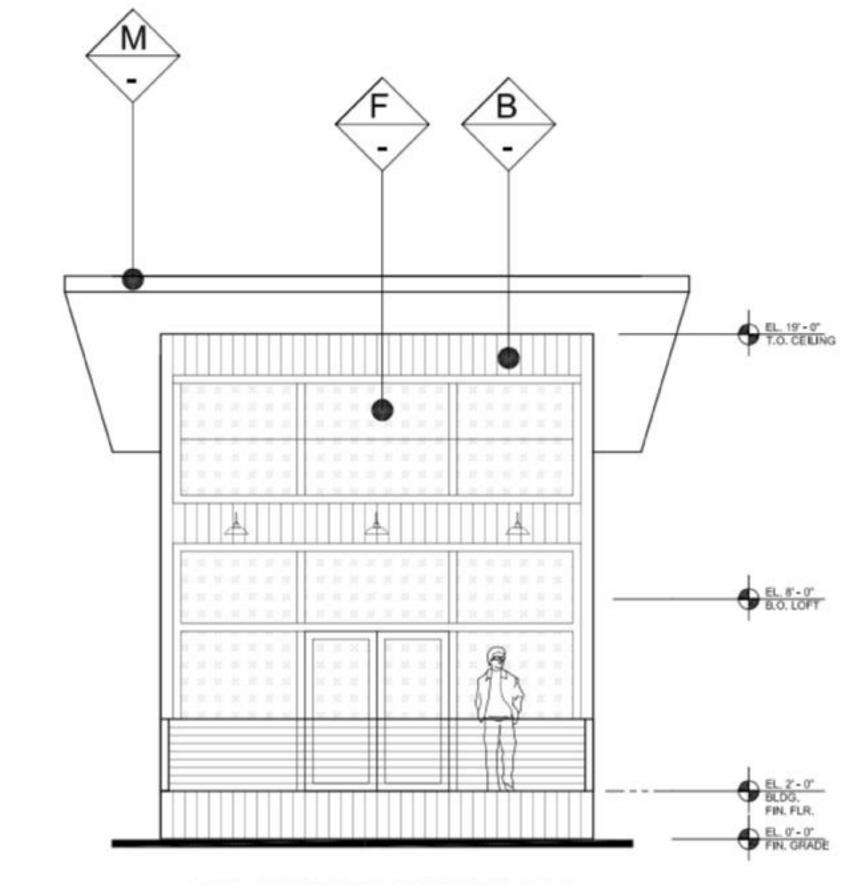
STUDIO W/ LOFT (3 QTY)

STRUCTURE TYPE & SF

STRUCTURE TYPE	GROSS SF
GROUND FLOOR	= 414 SF
LOFT	= 207 SF
TOTAL (EA CABIN)	= 621 SF

SECOND FLOOR

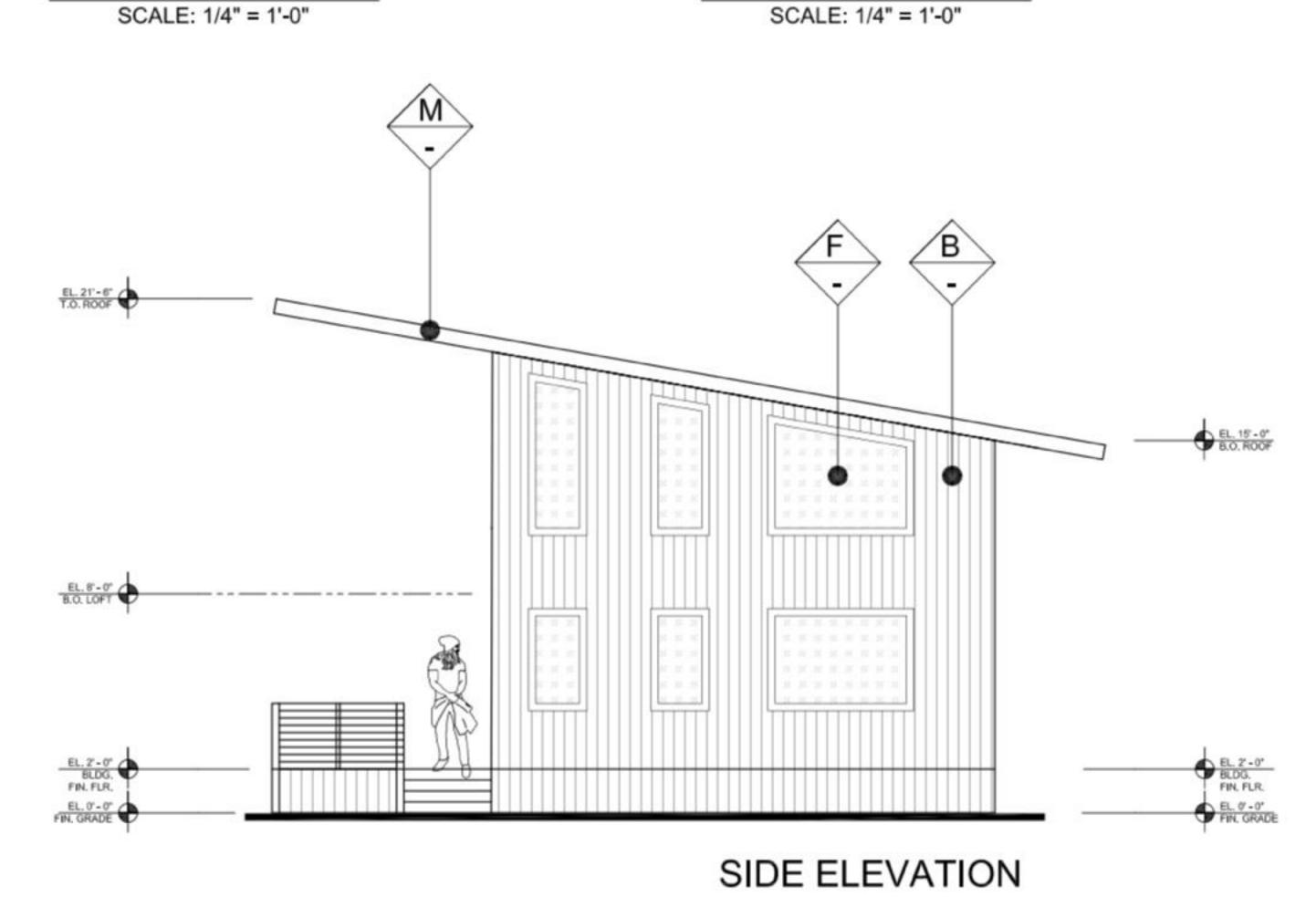


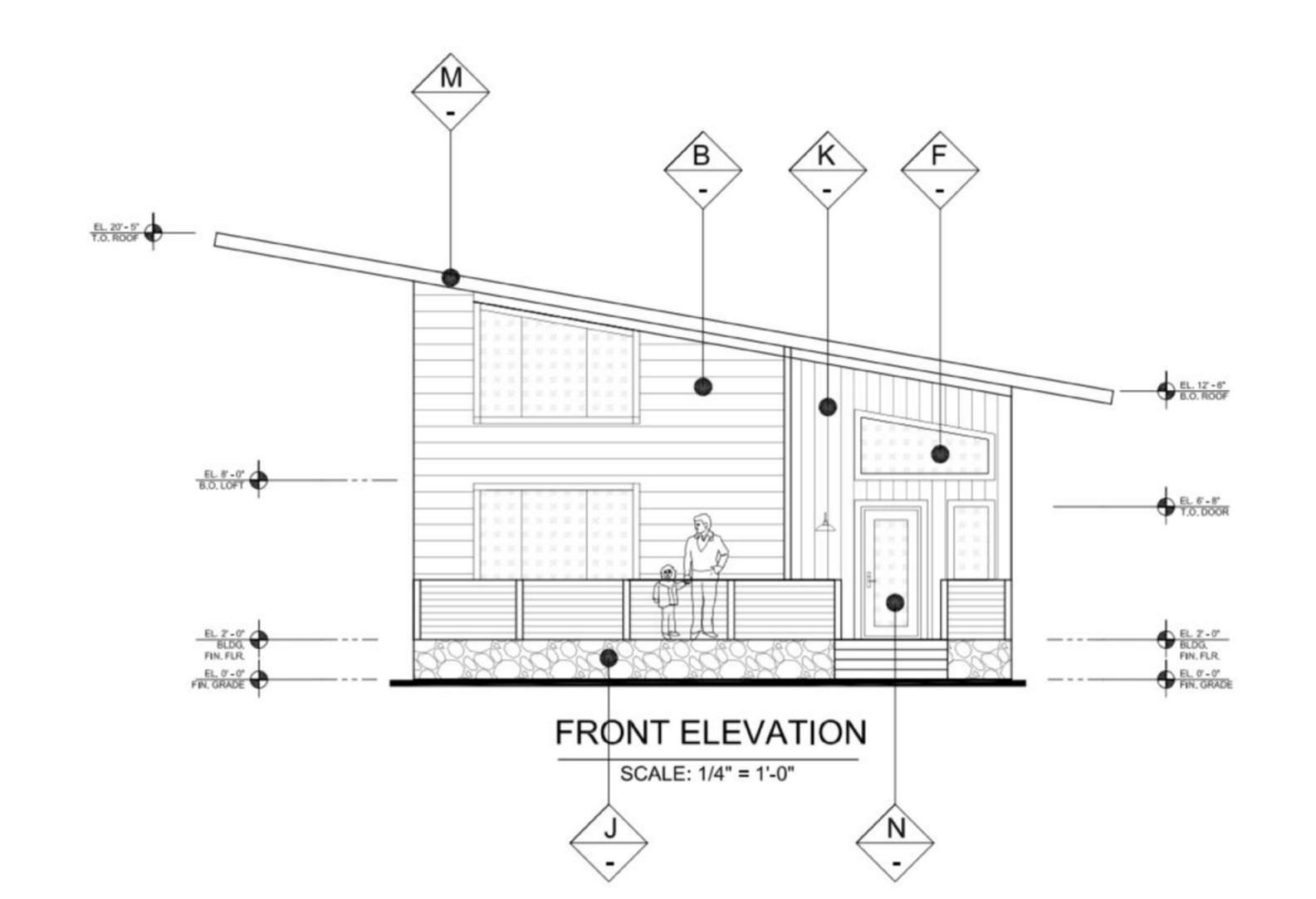


GROUND FLOOR

FRONT ELEVATION

SCALE: 1/4" = 1'-0"





2-BED W/ LOFT (3 QTY)

STRUCTURE TYPE & SF

STRUCTURE TYPE GROSS SF GROUND FLOOR = 169 SF = 690 SF LOFT W/ BATHROOM TOTAL = 859 SF

19'-10" BATH 6'-6"X9" LOFT 12'X22' OPEN TO BELOW

SECOND FLOOR

SCALE: 1/4" = 1'-0"

LEGEND

MATERIAL

- A COMPOSITE SIDING
- **B** CORRUGATED STEEL
- C STUCCO PANELS
- D STRUCTURAL I BEAM / AWNING
- E GLASS SWING DOOR
- F CLERESTORY WINDOWS
- G SLIDING WINDOWS H FRENCH OR ROLL-UP DOOR
- I GREEN ROOF SYSTEM
- J LOCAL STONE
- K BOARD AND BATTEN SIDING L STEEL TRELLIS FENCE / GATE
- M STANDING SEAM METAL ROOF
- N MAN DOOR

FINISH & COLOR

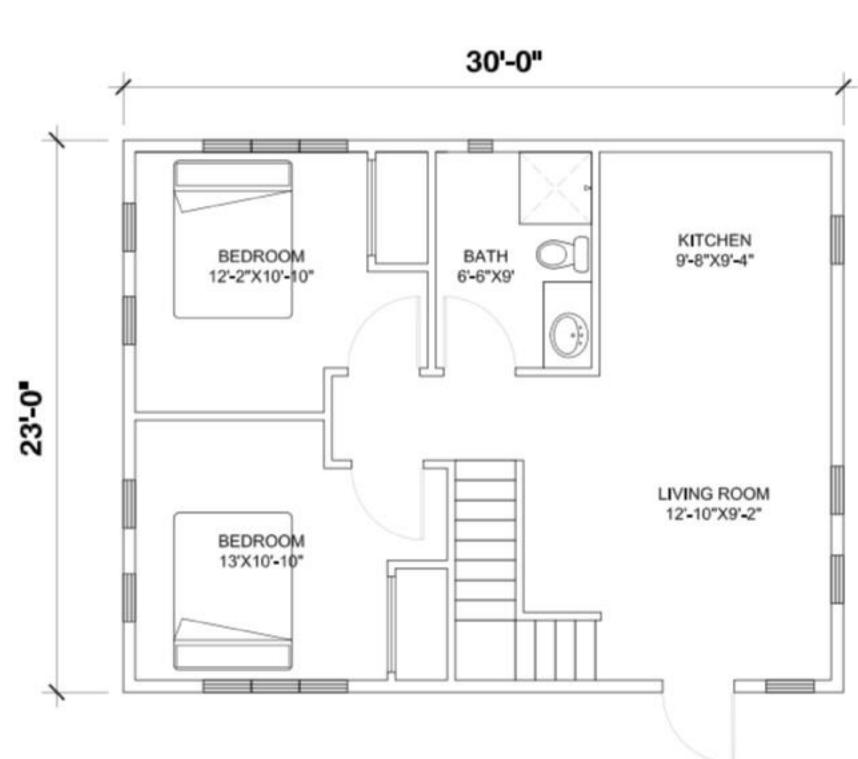
HORIZONTAL

VERTICAL OR HORIZONTAL

SANTA BARBARA WEATHERED & SEALED

BLACK AB-8 BLACK AB-8

CLEAR SEAL



GROUND FLOOR

SCALE: 1/4" = 1'-0"



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LICENSE



CONSULTANT

CLIENT

WESTERN CARE CONSTRUCTION COMPANY, INC.

PROJECT

OROVILLE RV **PARK**

SHEET TITLE

CABIN FLOOR PLANS & ELEVATIONS

DATES

NO. DESCRIPTION

PLOT DATE: ..

PROJECT NUMBERS

MELTON DESIGN GROUP: 2544 CONSULTANT PROJECT #: --

SHEET NUMBER

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PLOT DATE: October 30, 2023 - 2:15 PM FILE NAME: G:\MDG(2500-2599)\2544 Oroville RV Resort\2544 CAD\CDs\SHEETS\2544-A6.0-SIGN.dwg WASHHOUSE SIGN SCALE: $\frac{1}{4}$ " = WELCOME CENTER SIGNS CLUBHOUSE SIGN SCALE: 1" SCALE: $\frac{1}{4}$ " = 1'-0" 1'-0" SCALE: $\frac{1}{4}$ " = 1'-0" SHOP SIGN 6" BOLLARD SIGN @ RV SITES SCALE: $\frac{1}{2}$ " = 1'-0" SIGN @ CLUBHOUSE SCALE: $\frac{1}{2}$ " = 1'-0" <u>8-2</u> 4"H STEEL CHANNEL SITE NUMBERS CONCRETE BASE 2"W STEEL FRAME, BLACK RUSTED STEEL PANEL 3'-4" 3'-0" LOGO STEEL CHANNEL LETTERS STEEL CHANNEL LETTERS BOARD & BATTEN WOOD SIGN @ WELCOME CENTER SIGN @ WELCOME CENTER SCALE: $\frac{1}{4}$ " = 1'-0" **BUILDING SIGNS** SCALE: $\frac{1}{4}$ " = 1'-0" **ENTRY MONUMENT SIGN - OPT 1** ENTRY MONUMENT SIGN - OPT 2 1'-0" 호 그 SCALE: $\frac{3}{8}$ " = 1'-0" SCALE: $\frac{3}{8}$ " = 1'-0" 6'-6" 1'-8" 8'-10" 1'-6" MENT AESTHETIC ENT AESTHETIC UCH AS STEEL CIPAL CODE CHAPTER 17.20.080 L SIGNAGE TO BE LIT FROM BACK **2**' 4'-6" EL. 8' - 0" T.O. SIGN EL. 0' - 0" FIN. FLR. EL. 6' - 8" T.O. SIGN 7 6 5 4 3 2 1 7 DATES CLIENT PROJECT NUMBERS PLOT DATE: SHEET NUMBER CONSULTANT 820 BROADWAY ST. CHICO, CA 95928 (530) 899-1616 meltondg.com WESTERN CARE CONSTRUCTION COMPANY, INC. 0 MELTON DESIGN GROUP: 2544
CONSULTANT PROJECT #: --SIGN PROGRAM OROVILLE RV PARK A6.0 MELTON DESIGN GROUP INC COPYRIGHT 2023

DATE

APPENDIX B

Appendix B – Air Quality and Greenhouse Gas Emission Assessment Memorandum. ECORP, 2024

Oroville RV Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Oroville RV
Construction Start Date	6/3/2024
Operational Year	2024
Lead Agency	
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.90
Precipitation (days)	51.6
Location	39.52507934068052, -121.57655149557763
County	Butte
City	Oroville
Air District	Butte County AQMD
Air Basin	Sacramento Valley
TAZ	220
EDFZ	3
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq	Special Landscape	Population	Description
					ft)	Area (sq ft)		

Single Family Housing	8.00	Dwelling Unit	3.00	15,600	93,703	_	20.0	_
Health Club	14.2	1000sqft	3.00	14,165	0.00	_	_	_
Other Non-Asphalt Surfaces	15.6	Acre	15.6	0.00	0.00	_	_	_
Hotel	1.00	Room	0.03	1,452	0.00	_	_	_

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	-	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	4.45	3.87	36.0	34.1	0.06	1.60	19.8	21.4	1.47	10.1	11.6	_	6,768	6,768	0.28	0.06	1.04	6,793
Daily, Winter (Max)	-	_	_		_	_	_	_	-	-	-	_	-	_	-	_	_	_
Unmit.	2.77	3.84	20.2	25.7	0.04	0.92	0.20	1.12	0.85	0.05	0.89	_	4,291	4,291	0.18	0.05	0.03	4,310
Average Daily (Max)	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	1.50	2.14	11.0	14.7	0.02	0.47	1.36	1.75	0.43	0.59	0.95	_	2,482	2,482	0.10	0.03	0.24	2,494
Annual (Max)	_	_	_	_	-	_	_	_	_	_	_	_	_	_	-	-	_	_
Unmit.	0.27	0.39	2.00	2.69	< 0.005	0.09	0.25	0.32	0.08	0.11	0.17	1_	411	411	0.02	< 0.005	0.04	413

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2024	4.45	3.87	36.0	34.1	0.06	1.60	19.8	21.4	1.47	10.1	11.6	_	6,768	6,768	0.28	0.06	1.04	6,793
2025	2.62	3.72	19.0	25.9	0.04	0.81	0.20	1.01	0.74	0.05	0.79	_	4,312	4,312	0.18	0.05	0.96	4,332
Daily - Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2024	2.77	3.84	20.2	25.7	0.04	0.92	0.20	1.12	0.85	0.05	0.89	_	4,291	4,291	0.18	0.05	0.03	4,310
2025	2.59	3.70	19.0	25.4	0.04	0.81	0.20	1.01	0.74	0.05	0.79	_	4,286	4,286	0.18	0.05	0.03	4,305
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
2024	1.15	1.34	8.74	9.78	0.02	0.39	1.36	1.75	0.36	0.59	0.95	_	1,755	1,755	0.07	0.02	0.14	1,762
2025	1.50	2.14	11.0	14.7	0.02	0.47	0.11	0.58	0.43	0.03	0.46	_	2,482	2,482	0.10	0.03	0.24	2,494
Annual	_	_	_	_	_	_		_	_	_	_	_	_	_	_	_	_	_
2024	0.21	0.24	1.60	1.78	< 0.005	0.07	0.25	0.32	0.07	0.11	0.17	_	291	291	0.01	< 0.005	0.02	292
2025	0.27	0.39	2.00	2.69	< 0.005	0.09	0.02	0.11	0.08	< 0.005	0.08	_	411	411	0.02	< 0.005	0.04	413

2.4. Operations Emissions Compared Against Thresholds

Un/Mit.	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.74	3.39	2.67	20.3	0.04	0.06	2.64	2.70	0.05	0.67	0.73	48.7	4,029	4,078	5.10	0.19	14.4	4,277

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.26	2.91	3.08	16.1	0.03	0.06	2.64	2.69	0.05	0.67	0.73	48.7	3,728	3,777	5.12	0.21	0.55	3,968
Average Daily (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	2.37	3.02	2.90	16.5	0.03	0.06	2.55	2.61	0.05	0.65	0.70	48.7	3,796	3,844	5.11	0.20	6.33	4,038
Annual (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Unmit.	0.43	0.55	0.53	3.01	0.01	0.01	0.47	0.48	0.01	0.12	0.13	8.07	628	636	0.85	0.03	1.05	669

2.5. Operations Emissions by Sector, Unmitigated

Sector	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	-	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_
Mobile	2.56	2.38	2.47	19.0	0.03	0.04	2.64	2.68	0.04	0.67	0.71	_	3,502	3,502	0.15	0.18	14.2	3,573
Area	0.16	1.00	0.01	1.13	< 0.005	< 0.005	-	< 0.005	< 0.005	_	< 0.005	_	4.01	4.01	< 0.005	< 0.005	_	4.02
Energy	0.02	0.01	0.19	0.15	< 0.005	0.01	_	0.01	0.01	_	0.01	_	519	519	0.07	0.01	_	523
Water	_	_	_	_	_	_	_	_	_	_	_	3.09	3.96	7.04	0.32	0.01	_	17.2
Waste	_	_	_	_	_	_	_	_	_	_	_	45.6	0.00	45.6	4.56	0.00	_	160
Refrig.	_	_	-	-	_	_	_	-	_	_	_	_	_	_	_	-	0.18	0.18
Total	2.74	3.39	2.67	20.3	0.04	0.06	2.64	2.70	0.05	0.67	0.73	48.7	4,029	4,078	5.10	0.19	14.4	4,277
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	2.24	2.05	2.89	16.0	0.03	0.04	2.64	2.68	0.04	0.67	0.71	_	3,205	3,205	0.18	0.19	0.37	3,268
Area	_	0.85	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_

Energy	0.02	0.01	0.19	0.15	< 0.005	0.01	_	0.01	0.01	_	0.01	_	519	519	0.07	0.01	_	523
Water	_	_	_	_	_	_	_	_	_	_	_	3.09	3.96	7.04	0.32	0.01	_	17.2
Waste	_	_	_	_	_	_	_	_	_	-	_	45.6	0.00	45.6	4.56	0.00	_	160
Refrig.	_	_	_	_	_	_	-	_	_	-	_	_		_	_	_	0.18	0.18
Total	2.26	2.91	3.08	16.1	0.03	0.06	2.64	2.69	0.05	0.67	0.73	48.7	3,728	3,777	5.12	0.21	0.55	3,968
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_
Mobile	2.27	2.09	2.70	15.8	0.03	0.04	2.55	2.59	0.04	0.65	0.69	_	3,270	3,270	0.16	0.19	6.15	3,336
Area	0.08	0.92	0.01	0.56	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	1.98	1.98	< 0.005	< 0.005	_	1.98
Energy	0.02	0.01	0.19	0.15	< 0.005	0.01	_	0.01	0.01	_	0.01	_	519	519	0.07	0.01	_	523
Water	_	_	_	_	_	_	_	_	_	_	_	3.09	3.96	7.04	0.32	0.01	_	17.2
Waste	_	_	_	_	_	_	_	_	_	_	_	45.6	0.00	45.6	4.56	0.00	_	160
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_	0.18	0.18
Total	2.37	3.02	2.90	16.5	0.03	0.06	2.55	2.61	0.05	0.65	0.70	48.7	3,796	3,844	5.11	0.20	6.33	4,038
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Mobile	0.41	0.38	0.49	2.88	0.01	0.01	0.47	0.47	0.01	0.12	0.13	_	541	541	0.03	0.03	1.02	552
Area	0.01	0.17	< 0.005	0.10	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	0.33	0.33	< 0.005	< 0.005	_	0.33
Energy	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	86.0	86.0	0.01	< 0.005	_	86.6
Water	_	_	_	_	_	_	_	_	_	-	_	0.51	0.66	1.17	0.05	< 0.005	_	2.85
Waste	_	_	_	_	_	_	_	_	_	_	_	7.56	0.00	7.56	0.76	0.00	_	26.4
Refrig.	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.03	0.03
Total	0.43	0.55	0.53	3.01	0.01	0.01	0.47	0.48	0.01	0.12	0.13	8.07	628	636	0.85	0.03	1.05	669

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	-	-	_	_	_	_	_	_	_	_	_	_	_	_	
Off-Road Equipmen		3.65	36.0	32.9	0.05	1.60	_	1.60	1.47	_	1.47	_	5,296	5,296	0.21	0.04	_	5,314
Dust From Material Movement	_	-	_	-	-	_	19.7	19.7	_	10.1	10.1	_	-	_	-	-	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	-	_	-
Average Daily	_	_	-	_	_	_	_	_	_	_	-		_	_	_	_	_	_
Off-Road Equipmen		0.10	0.99	0.90	< 0.005	0.04	-	0.04	0.04	_	0.04	_	145	145	0.01	< 0.005	_	146
Dust From Material Movement	_	_	_	_	_	_	0.54	0.54	_	0.28	0.28	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.02	0.18	0.16	< 0.005	0.01	-	0.01	0.01	_	0.01	_	24.0	24.0	< 0.005	< 0.005	_	24.1
Dust From Material Movement	_	_	_		_	_	0.10	0.10	_	0.05	0.05	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	_	_	_	-	_	_	_	-	-	_	_	_	_	_	_	_	_	-
Daily, Summer (Max)	_	_	_	_	_		_	_	_	_	_	_		-	_	_	_	-
Worker	0.11	0.11	0.07	1.18	0.00	0.00	0.13	0.13	0.00	0.03	0.03	_	149	149	0.01	0.01	0.60	151
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_	-
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	3.69	3.69	< 0.005	< 0.005	0.01	3.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	-		_	-	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		3.52	34.3	30.2	0.06	1.45	_	1.45	1.33	_	1.33	_	6,598	6,598	0.27	0.05	_	6,621

Dust From Material Movement	_ :	_			_	_	9.20	9.20	_	3.65	3.65	_	_	_	_	_		_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_		_	_	_	_	_	_	-	_	_	_	_	_	-
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.29	2.82	2.48	0.01	0.12	_	0.12	0.11	_	0.11	_	542	542	0.02	< 0.005	_	544
Dust From Material Movement	_ t	_	_	-	_	_	0.76	0.76	-	0.30	0.30	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.05	0.51	0.45	< 0.005	0.02	-	0.02	0.02	_	0.02	_	89.8	89.8	< 0.005	< 0.005	-	90.1
Dust From Material Movement	_	_	-		_	_	0.14	0.14	-	0.05	0.05	_	_	-	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	-
Worker	0.13	0.12	0.08	1.35	0.00	0.00	0.15	0.15	0.00	0.03	0.03	_	170	170	0.01	0.01	0.69	173
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

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Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	12.6	12.6	< 0.005	< 0.005	0.02	12.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	2.09	2.09	< 0.005	< 0.005	< 0.005	2.13
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2024) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Off-Road Equipmen		1.20	11.2	13.1	0.02	0.50	_	0.50	0.46	_	0.46	_	2,398	2,398	0.10	0.02	_	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		1.20	11.2	13.1	0.02	0.50	_	0.50	0.46	_	0.46	_	2,398	2,398	0.10	0.02	_	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_
Off-Road Equipmen		0.29	2.74	3.21	0.01	0.12	-	0.12	0.11	_	0.11	_	587	587	0.02	< 0.005	_	589
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	1_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.05	0.50	0.59	< 0.005	0.02	-	0.02	0.02	-	0.02	-	97.1	97.1	< 0.005	< 0.005	_	97.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	-	_	_	_	_	_	-	_	_	_	-	_	_	_	_	-
Worker	0.06	0.06	0.04	0.64	0.00	0.00	0.07	0.07	0.00	0.02	0.02	_	80.1	80.1	< 0.005	< 0.005	0.32	81.4
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	51.3	51.3	< 0.005	0.01	0.13	53.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Worker	0.05	0.05	0.05	0.48	0.00	0.00	0.07	0.07	0.00	0.02	0.02	_	70.5	70.5	0.01	< 0.005	0.01	71.5
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	51.3	51.3	< 0.005	0.01	< 0.005	53.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_	-	_	_
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	_	17.8	17.8	< 0.005	< 0.005	0.03	18.0
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	12.5	12.5	< 0.005	< 0.005	0.01	13.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Vorker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	2.94	2.94	< 0.005	< 0.005	0.01	2.99

Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	2.08	2.08	< 0.005	< 0.005	< 0.005	2.17
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	<u> </u>	_	<u> </u>	_	_	<u> </u>	_	_	_	_	_	_	-	_	_	<u> </u>	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipment		1.13	10.4	13.0	0.02	0.43	_	0.43	0.40	_	0.40	_	2,398	2,398	0.10	0.02	_	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	-	-	_	-	_	-	_	_	-	_	_	_	_	_	_	_	-
Off-Road Equipment		1.13	10.4	13.0	0.02	0.43	_	0.43	0.40	_	0.40	-	2,398	2,398	0.10	0.02	_	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	-	-	-	_	-	-	_	_	_	-	-	_	_	<u> </u>	_	_	_
Off-Road Equipment		0.65	6.05	7.55	0.01	0.25	-	0.25	0.23	_	0.23	-	1,389	1,389	0.06	0.01	_	1,394
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipment		0.12	1.10	1.38	< 0.005	0.05	_	0.05	0.04	_	0.04	-	230	230	0.01	< 0.005	_	231
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_
Worker	0.06	0.05	0.03	0.59	0.00	0.00	0.07	0.07	0.00	0.02	0.02	_	78.5	78.5	< 0.005	< 0.005	0.30	79.7
Vendor	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	-	50.3	50.3	< 0.005	0.01	0.13	52.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.05	0.05	0.04	0.45	0.00	0.00	0.07	0.07	0.00	0.02	0.02	_	69.1	69.1	< 0.005	< 0.005	0.01	70.1
Vendor	< 0.005	< 0.005	0.09	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	50.4	50.4	< 0.005	0.01	< 0.005	52.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.03	0.03	0.02	0.26	0.00	0.00	0.04	0.04	0.00	0.01	0.01	_	41.2	41.2	< 0.005	< 0.005	0.07	41.9
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	_	29.2	29.2	< 0.005	< 0.005	0.03	30.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_
Worker	0.01	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	-	6.82	6.82	< 0.005	< 0.005	0.01	6.93
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	_	4.83	4.83	< 0.005	< 0.005	0.01	5.05
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2024) - Unmitigated

Location	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	<u> </u>	<u> </u>	_	_	<u> </u>	_	_	_	_	_	<u> </u>	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Off-Road Equipmen		0.85	7.81	10.0	0.01	0.39	_	0.39	0.36	_	0.36	_	1,512	1,512	0.06	0.01	_	1,517
Paving	_	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.85	7.81	10.0	0.01	0.39	_	0.39	0.36	_	0.36	_	1,512	1,512	0.06	0.01		1,517
Paving	_	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	-	_	_	-	-	-	-	-	-	-	_	_	_	-	-	-
Off-Road Equipmen		0.21	1.91	2.45	< 0.005	0.10	-	0.10	0.09	-	0.09	-	370	370	0.01	< 0.005	-	371
Paving	_	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.04	0.35	0.45	< 0.005	0.02	-	0.02	0.02	-	0.02	-	61.2	61.2	< 0.005	< 0.005	-	61.4
Paving	_	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	-	-	_	_	-	-	-	-	_	_		_	_	_	_	-
Worker	0.10	0.09	0.06	1.01	0.00	0.00	0.11	0.11	0.00	0.03	0.03	_	127	127	0.01	< 0.005	0.52	129
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	-	_	-	_	_	_	_		_	_	_	-
Worker	0.08	0.08	0.08	0.76	0.00	0.00	0.11	0.11	0.00	0.03	0.03	_	112	112	0.01	< 0.005	0.01	114
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.02	0.02	0.02	0.19	0.00	0.00	0.03	0.03	0.00	0.01	0.01	_	28.2	28.2	< 0.005	< 0.005	0.05	28.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	-	_	_	_	-	_	_	_	-	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	4.67	4.67	< 0.005	< 0.005	0.01	4.75
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

Location	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	<u> </u>	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.80	7.45	9.98	0.01	0.35	_	0.35	0.32	_	0.32	_	1,511	1,511	0.06	0.01	_	1,517
Paving	_	0.00	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)		_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_
Off-Road Equipmen		0.80	7.45	9.98	0.01	0.35	-	0.35	0.32	-	0.32	-	1,511	1,511	0.06	0.01	-	1,517
Paving	_	0.00	Ī-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	-	_	_	-	_	_			_	-	-	_	_	_	-	-
Off-Road Equipmen		0.46	4.30	5.76	0.01	0.20	_	0.20	0.19		0.19	-	873	873	0.04	0.01	-	876
Paving	_	0.00	_	_	_	_	_	_	_	<u> </u>	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_		_	_	_	_	_	_	_	_
Off-Road Equipmen		0.08	0.79	1.05	< 0.005	0.04	_	0.04	0.03	-	0.03	-	144	144	0.01	< 0.005	-	145
Paving	_	0.00	<u> </u>	_	_	_	_	_	_		_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	<u> </u>	<u> </u>	_	_	_	_	<u> </u>	<u> </u>	<u> </u>	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	-	_	_	_	_	_	_	_	_	-	_	-	_	_
Worker	0.09	0.08	0.05	0.94	0.00	0.00	0.11	0.11	0.00	0.03	0.03	_	125	125	0.01	< 0.005	0.47	127
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	-	_	_	-	_	_	_	_	_	-	_	-	_	-
Worker	0.08	0.07	0.07	0.71	0.00	0.00	0.11	0.11	0.00	0.03	0.03	_	110	110	0.01	< 0.005	0.01	111

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	-	_	_	-	_	-	_	-	_	_	_	_
Worker	0.05	0.04	0.04	0.42	0.00	0.00	0.06	0.06	0.00	0.01	0.01	_	65.3	65.3	< 0.005	< 0.005	0.12	66.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	10.8	10.8	< 0.005	< 0.005	0.02	11.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2024) - Unmitigated

			ly ioi uai									T T	1		1	The state of the s		
Location	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.14	0.91	1.15	< 0.005	0.03	_	0.03	0.03	_	0.03	_	134	134	0.01	< 0.005	_	134
Architect ural Coatings	_	1.51	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.14	0.91	1.15	< 0.005	0.03	_	0.03	0.03	_	0.03	_	134	134	0.01	< 0.005	_	134

Architect	_	1.51	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Coatings																		
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.03	0.22	0.28	< 0.005	0.01	_	0.01	0.01	_	0.01	_	32.7	32.7	< 0.005	< 0.005	_	32.8
Architect ural Coatings	_	0.37	_	_	-	_	_	_	_	_	_	_	-	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	1	_	_	_	_	_	_	<u> </u>	_	_	_	_	_		_	_
Off-Road Equipmen		0.01	0.04	0.05	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	-	5.41	5.41	< 0.005	< 0.005	_	5.43
Architect ural Coatings	_	0.07	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	-
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	-	-	_	_	_	_	_	_	_	-	-		_	_	-	_	_
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	16.0	16.0	< 0.005	< 0.005	0.06	16.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.01	0.01	0.01	0.10	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	14.1	14.1	< 0.005	< 0.005	< 0.005	14.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	3.55	3.55	< 0.005	< 0.005	0.01	3.61
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Architectural Coating (2025) - Unmitigated

	TOG	ROG	NOx	СО				PM10T		PM2.5D		BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Location	100	RUG	INUX	100	302	PINITUE	PINITUD	PIVITUT	PIVIZ.5E	PIVIZ.5D	PIVIZ.51	BCU2	INDCUZ	CO21	СП4	INZU	K	COZE
Onsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.13	0.88	1.14	< 0.005	0.03	_	0.03	0.03	_	0.03	_	134	134	0.01	< 0.005	_	134
Architect ural Coatings	_	1.51	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.13	0.88	1.14	< 0.005	0.03	_	0.03	0.03	_	0.03	_	134	134	0.01	< 0.005	_	134

Architect	_	1.51	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	-
ural Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_
Off-Road Equipmen		0.07	0.51	0.66	< 0.005	0.02	_	0.02	0.01	_	0.01	_	77.1	77.1	< 0.005	< 0.005	_	77.3
Architect ural Coatings	_	0.87	_	_	_	_	_	_	_	_	_		_	_	_	_	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Off-Road Equipmen		0.01	0.09	0.12	< 0.005	< 0.005	_	< 0.005	< 0.005	-	< 0.005	-	12.8	12.8	< 0.005	< 0.005	-	12.8
Architect ural Coatings	_	0.16	-	_	_	_	_	_	_	_	_	-	-	-	_	-	_	_
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Summer (Max)	_	-	-	_	_	_	_	_	_	_	_		_	_	_	_	_	-
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	-	15.7	15.7	< 0.005	< 0.005	0.06	15.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.01	0.01	0.01	0.09	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	13.8	13.8	< 0.005	< 0.005	< 0.005	14.0
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	_	8.21	8.21	< 0.005	< 0.005	0.01	8.34
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Annual	_	_		_	_	_	_	_	_	-	_	_	_	_	_	_	_	_
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	_	1.36	1.36	< 0.005	< 0.005	< 0.005	1.38
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	0.47	0.43	0.61	4.72	0.01	0.01	0.70	0.71	0.01	0.18	0.19	_	919	919	0.03	0.04	3.77	937
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	2.09	1.95	1.86	14.3	0.03	0.03	1.94	1.97	0.03	0.49	0.52	_	2,582	2,582	0.12	0.13	10.5	2,636

Total	2.56	2.38	2.47	19.0	0.03	0.04	2.64	2.68	0.04	0.67	0.71	_	3,502	3,502	0.15	0.18	14.2	3,573
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_	_	_
Single Family Housing	0.42	0.38	0.72	3.77	0.01	0.01	0.70	0.71	0.01	0.18	0.19	_	841	841	0.04	0.05	0.10	856
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asph Surfaces	0.00 nalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	1.82	1.67	2.17	12.2	0.02	0.03	1.94	1.97	0.03	0.49	0.52	-	2,365	2,365	0.14	0.15	0.27	2,412
Total	2.24	2.05	2.89	16.0	0.03	0.04	2.64	2.68	0.04	0.67	0.71	_	3,205	3,205	0.18	0.19	0.37	3,268
Annual	_	_	_	_	_	_	_	_	_	_	-	_	_	_	_		_	_
Single Family Housing	0.08	0.07	0.12	0.70	< 0.005	< 0.005	0.12	0.13	< 0.005	0.03	0.03	_	142	142	0.01	0.01	0.27	145
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asph Surfaces	0.00 nalt	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	0.34	0.31	0.37	2.19	< 0.005	0.01	0.34	0.35	0.01	0.09	0.09	_	399	399	0.02	0.02	0.75	408
Total	0.41	0.38	0.49	2.88	0.01	0.01	0.47	0.47	0.01	0.12	0.13	_	541	541	0.03	0.03	1.02	552

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

L	_and	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Ų	Jse																		

Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	_	196	196	0.03	< 0.005	_	198
Health Club	_	_	_	_	_	_	_	_	_	-	_	_	93.6	93.6	0.02	< 0.005	_	94.5
Other Non-Aspha Surfaces	— alt	_	_	_	-	_	_	_	_	_	_	-	0.00	0.00	0.00	0.00	-	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	290	290	0.05	0.01	_	293
Daily, Winter (Max)	_	_	_	_	-	_	_	_	_	_	_	-	_	_	_	_	_	-
Single Family Housing	_	-	-	_	-	_	_	_	_	-	_	-	196	196	0.03	< 0.005	-	198
Health Club	_	-	-	_	-	_	-	_	_	-	_	_	93.6	93.6	0.02	< 0.005	_	94.5
Other Non-Aspha Surfaces	— alt	-	-	_	-	_	_	_	_	_	_	-	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_		290	290	0.05	0.01	_	293
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	-	-	-	-	_	_	_	_	-	_	-	32.5	32.5	0.01	< 0.005	-	32.8
Health Club	_	-	-	_	-	-	-	_	_	-	-	-	15.5	15.5	< 0.005	< 0.005	_	15.7
Other Non-Aspha Surfaces	— alt	_	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	_	48.0	48.0	0.01	< 0.005	_	48.4

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	-	-	_	-	-	_	-	-	-	_	_	-	-	_	_	-	_	-
Single Family Housing	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	-	< 0.005	< 0.005	_	< 0.005	-	43.3	43.3	< 0.005	< 0.005	_	43.5
Health Club	0.02	0.01	0.16	0.13	< 0.005	0.01	_	0.01	0.01	_	0.01	_	186	186	0.02	< 0.005	_	187
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	-	0.00	0.00	0.00	0.00	_	0.00
Total	0.02	0.01	0.19	0.15	< 0.005	0.01	_	0.01	0.01	_	0.01	_	230	230	0.02	< 0.005	_	230
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	-
Single Family Housing	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	-	< 0.005	< 0.005	_	< 0.005	_	43.3	43.3	< 0.005	< 0.005	_	43.5
Health Club	0.02	0.01	0.16	0.13	< 0.005	0.01	_	0.01	0.01	-	0.01	-	186	186	0.02	< 0.005	_	187
Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	0.02	0.01	0.19	0.15	< 0.005	0.01	_	0.01	0.01	_	0.01	_	230	230	0.02	< 0.005	_	230
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	-	< 0.005	< 0.005	_	< 0.005	_	7.17	7.17	< 0.005	< 0.005	_	7.19
Health Club	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	_	< 0.005	< 0.005	-	< 0.005	_	30.8	30.8	< 0.005	< 0.005	_	30.9

Other Non-Asph Surfaces	0.00 alt	0.00	0.00	0.00	0.00	0.00	_	0.00	0.00	_	0.00	_	0.00	0.00	0.00	0.00	_	0.00
Total	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	38.0	38.0	< 0.005	< 0.005	_	38.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

Source	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	0.72	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.12	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt	0.16	0.15	0.01	1.13	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	4.01	4.01	< 0.005	< 0.005	_	4.02
Total	0.16	1.00	0.01	1.13	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	4.01	4.01	< 0.005	< 0.005	_	4.02
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	0.72	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings	_	0.12	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	0.85	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Consum er Products	_	0.13	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Architect ural Coatings		0.02	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Landsca pe Equipme nt		0.01	< 0.005	0.10	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	0.33	0.33	< 0.005	< 0.005	_	0.33
Total	0.01	0.17	< 0.005	0.10	< 0.005	< 0.005	_	< 0.005	< 0.005	_	< 0.005	_	0.33	0.33	< 0.005	< 0.005	_	0.33

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	1.48	2.49	3.97	0.15	< 0.005	_	8.87
Health Club	_	_	_	_	_	_	_	_	_	_	_	1.61	1.47	3.07	0.16	< 0.005	_	8.37
Other Non-Asph Surfaces	— alt	_	_	_	-	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	3.09	3.96	7.04	0.32	0.01	_	17.2
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	1.48	2.49	3.97	0.15	< 0.005	_	8.87
Health Club	_	_	_	_	_	_	_	_	_	_		1.61	1.47	3.07	0.16	< 0.005	_	8.37
Other Non-Asph Surfaces	— alt	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	3.09	3.96	7.04	0.32	0.01	_	17.2
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	0.25	0.41	0.66	0.03	< 0.005	_	1.47
Health Club	_	_	_	_	_	_	_	_	_	_	_	0.27	0.24	0.51	0.03	< 0.005	_	1.39
Other Non-Asph Surfaces	— alt	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	0.51	0.66	1.17	0.05	< 0.005	_	2.85

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D		PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	2.13	0.00	2.13	0.21	0.00	_	7.46

Health Club	_	_	_	_	_	_	_	_	_	_	_	43.5	0.00	43.5	4.35	0.00	_	152
Other Non-Aspha Surfaces	— alt	_	_	-	_	_	_	_	_	_	-	0.00	0.00	0.00	0.00	0.00	_	0.00
Hotel	_	_	_	_	_	_	_	<u> </u>	Ī	<u> </u>	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	_	_	45.6	0.00	45.6	4.56	0.00	_	160
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	-	_		_	_	-	_	-
Single Family Housing	_	_	_	_	_	_	-	_	_	_	-	2.13	0.00	2.13	0.21	0.00	_	7.46
Health Club	_	_	_	_	_	_	_	_	_	_	_	43.5	0.00	43.5	4.35	0.00	_	152
Other Non-Aspha Surfaces	— alt	_	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Hotel	_	_	_	_	_	_	_	-	<u> </u>	-	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	_	_	_	_	_	-	_	45.6	0.00	45.6	4.56	0.00	_	160
Annual	_	_	_	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	_	_	-	_	_	_	_	_	_	-	0.35	0.00	0.35	0.04	0.00	_	1.23
Health Club	_	-	_	-	-	_	_	_	_	_	_	7.20	0.00	7.20	0.72	0.00	-	25.2
Other Non-Aspha Surfaces	— alt	_	_	_	_	_	-	_	_	-	-	0.00	0.00	0.00	0.00	0.00	_	0.00
Hotel	_	<u> </u>	_	_	_	_	_	_	_	_	_	0.00	0.00	0.00	0.00	0.00	_	0.00
Total	_	_	_	_	1_	_	_	_	_	_	_	7.56	0.00	7.56	0.76	0.00	_	26.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	СО	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	СО2Т	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_
Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.11	0.11
Health Club	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	0.07	0.07
Total	_	_	_	_	_	_	_	_	_	-	_	_	-	_	_	_	0.18	0.18
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	-
Single Family Housing	_	_	-	_	_	-	_	_	_	_	_	_	_	_	_	_	0.11	0.11
Health Club	_	_	_	_	_	_	_	_	_	_	_	_	-	_	_	_	0.07	0.07
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.18	0.18
Annual	_	_	_	_	<u> </u>	_	-	_	_	-	_	_	<u> </u>	_	_	_	_	_
Single Family Housing	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.02	0.02
Health Club	_	_	-	_	_	_	_	_	_	_	-	_	-	_	_	-	0.01	0.01
Total .	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	0.03	0.03

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Туре																		
Daily, Summer (Max)		_		_		_						_	_					_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_		_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Equipme nt Type	TOG	ROG		со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	TOG	ROG	NOx	со	SO2	PM10E			PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Vegetatio n	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

OTITOTIC										117 yr 101								
Land Use	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Total	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Species	TOG	ROG	NOx	со	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_

Sequest —	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove —	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
_ _		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Daily, — Winter (Max)	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest — ered	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove —	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Annual —	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Avoided —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Sequest — ered		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —	-	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Remove —	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
Subtotal —		_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
			_	_	_	_	_	_	_	_	_	_	_			_	_	

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	7/2/2024	7/16/2024	5.00	10.0	_
Grading	Grading	7/17/2024	8/28/2024	5.00	30.0	_
Building Construction	Building Construction	8/29/2024	10/23/2025	5.00	300	_
Paving	Paving	8/29/2024	10/22/2025	5.00	300	_
Architectural Coating	Architectural Coating	8/29/2024	10/22/2025	5.00	300	_

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backh oes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backh oes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backh oes	Diesel	Average	3.00	7.00	84.0	0.37

Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	_	_	_	_
Site Preparation	Worker	17.5	10.3	LDA,LDT1,LDT2
Site Preparation	Vendor	_	4.50	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	_	_	HHDT
Grading	_	_	_	_
Grading	Worker	20.0	10.3	LDA,LDT1,LDT2
Grading	Vendor	_	4.50	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	_	_	HHDT
Building Construction	_	_	_	_
Building Construction	Worker	9.44	10.3	LDA,LDT1,LDT2
Building Construction	Vendor	3.41	4.50	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	_	_	HHDT
Paving	_	_	_	_
Paving	Worker	15.0	10.3	LDA,LDT1,LDT2

Paving	Vendor	_	4.50	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	_	_	HHDT
Architectural Coating	_	_	_	_
Architectural Coating	Worker	1.89	10.3	LDA,LDT1,LDT2
Architectural Coating	Vendor	_	4.50	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	_	_	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	31,590	10,530	23,426	7,809	40,877

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	_	_	15.0	0.00	_
Grading	_	_	90.0	0.00	_
Paving	0.00	0.00	0.00	0.00	15.7

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Single Family Housing	0.09	0%
Health Club	0.00	0%
Other Non-Asphalt Surfaces	15.6	0%
Hotel	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005
2025	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Single Family Housing	54.0	54.0	54.0	19,710	977	977	977	356,624
Health Club	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hotel	306	306	306	111,690	2,711	2,711	2,711	989,564

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
31590	10,530	23,426	7,809	40,877

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Single Family Housing	350,976	204	0.0330	0.0040	135,208
Health Club	167,495	204	0.0330	0.0040	580,963
Other Non-Asphalt Surfaces	0.00	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Land Ose	Indoor water (gar/year)	Outdoor Water (gar/year)

Single Family Housing	773,682	1,260,524
Health Club	837,763	0.00
Other Non-Asphalt Surfaces	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Single Family Housing	3.95	_
Health Club	80.7	_
Other Non-Asphalt Surfaces	0.00	_
Hotel	0.00	_

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Single Family Housing	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Single Family Housing	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Health Club	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Health Club	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type Fuel Type Engine Tier Number per Day Hours Per Day Horsepower Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours por Voor	Horoopowor	Load Footor
Equipment Type	Truel Type	Inumber per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

auinment Type	Fuel Type	Number	Poilor Poting (MMPtu/br)	Daily Heat Input (MMBtu/day)	Appual Hoot Input (MM/Ptu/vr)
quipment Type	ruei Type	Number	Doller Rating (MiMDtu/III)	Daily fleat illput (iviivibitu/uay)	Annual Heat Input (MiMbtu/yr)

5.17. User Defined

Equipment Type Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

 Vegetation Land Use Type
 Vegetation Soil Type
 Initial Acres
 Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type Final Acres Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
			· · · · · · · · · · · · · · · · · · ·

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.4	annual days of extreme heat
Extreme Precipitation	8.40	annual days with precipitation above 20 mm
Sea Level Rise	_	meters of inundation depth
Wildfire	9.94	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	3	0	0	N/A

Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	3	1	1	3
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution	
Indicator	Result for Project Census Tract
Exposure Indicators	_
AQ-Ozone	70.3
AQ-PM	18.5
AQ-DPM	8.45
Drinking Water	30.4
Lead Risk Housing	56.2
Pesticides	74.6
Toxic Releases	6.36
Traffic	24.2
Effect Indicators	_
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	58.7
Solid Waste	0.00
Sensitive Population	_
Asthma	69.1
Cardio-vascular	97.1
Low Birth Weights	75.3
Socioeconomic Factor Indicators	
Education	54.8
Housing	34.8

Linguistic	33.9
Poverty	81.2
Unemployment	89.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	_
Above Poverty	9.277556782
Employed	2.24560503
Median HI	17.49005518
Education	_
Bachelor's or higher	10.61208777
High school enrollment	100
Preschool enrollment	8.700115488
Transportation	_
Auto Access	51.48209932
Active commuting	21.27550366
Social	_
2-parent households	33.15796227
Voting	30.02694726
Neighborhood	_
Alcohol availability	75.24701655
Park access	7.673553189
Retail density	28.34595149
Supermarket access	24.62466316
Tree canopy	52.84229437

Housing	_
Homeownership	55.98614141
Housing habitability	28.62825613
Low-inc homeowner severe housing cost burden	32.33671243
Low-inc renter severe housing cost burden	4.439881945
Uncrowded housing	26.88310022
Health Outcomes	_
Insured adults	55.78082895
Arthritis	0.0
Asthma ER Admissions	10.5
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	7.1
Cognitively Disabled	0.9
Physically Disabled	13.2
Heart Attack ER Admissions	0.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	_

Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	_
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	65.5
Elderly	54.5
English Speaking	71.9
Foreign-born	29.9
Outdoor Workers	71.7
Climate Change Adaptive Capacity	_
Impervious Surface Cover	92.1
Traffic Density	8.7
Traffic Access	0.0
Other Indices	_
Hardship	84.6
Other Decision Support	_
2016 Voting	9.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	48.0
Healthy Places Index Score for Project Location (b)	10.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Building construction, paving and painting assumed to occur simultaneously.
Operations: Vehicle Data	Trips updated to match Transportation Evaluation provided by Headway. Hotel trip lengths doubled for a conservatives estimate.
Operations: Hearths	No woodstoves or hearths proposed.
Operations: Energy Use	Hotel was used for modeling of trips. Not needed for energy usage. Electricity usage multiplied by a factor of 5 to account for RV electricity hookups.
Operations: Water and Waste Water	Hotel was used for modeling of trips. Not needed for water usage. Single family indoor water usage trippled to account for RV hookups
Operations: Solid Waste	Hotel was used for modeling of trips. Not needed for waste generation.
Operations: Refrigerants	Hotel was used for modeling of trips.
Land Use	lot acreage updated to match project. Hotel being modeled for trip distances.

APPENDIX C

Appendix C – Biological Resources Assessment for the Oroville RV Resort Project, ECORP, 2024

Biological Resources Assessment for the Oroville RV Resort Project

Butte County, California

Prepared For:

Melton Design Group

Prepared By:



2525 Warren Drive Rocklin, California 95677

January 9, 2024

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Appendix C – List of Plant Species Observed within the Study Area

Appendix D – List of Wildlife Species Observed within the Study Area

LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
°F	Degrees Fahrenheit
Agencies	USEPA and Department of the Army
ARD	Aquatic Resources Delineation
BA	Biological Assessment
BCC	Birds of Conservation Concern
ВО	Biological Opinion
BRA	Biological Resources Assessment
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct population segment
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit

Term Description

GPS Global Positioning System HCP Habitat Conservation Plan

IPaC Information, Planning, and Consultation

MBTA Migratory Bird Treaty Act

MSL Mean sea level

NMFS National Marine Fisheries Service

NOAA National Oceanic and Atmospheric Administration
NPDES National Pollutant Discharge Elimination System

NPPA Native Plant Protection Act

NRCS Natural Resources Conservation Service

Project Oroville RV Resort Project

RWQCB Regional Water Quality Control Board
SAA Streambed Alteration Application
SSC Species of Special Concern

Study Area 20.96-acre Proposed Project within the City of Oroville in Butte County, California

USACE U.S. Army Corps of Engineers

USC U.S. Code

USEPA U.S. Environmental Protection Agency

USFWS U.S. Fish and Wildlife Service

USGS U.S. Geological Survey
WBWG Western Bat Working Group

WL Watch List

1.0 INTRODUCTION

At the request of Melton Design Group, ECORP Consulting, Inc. conducted a Biological Resources Assessment (BRA) for the proposed Oroville RV Resort Project (Project) located in Oroville, California. The purpose of the assessment was to collect information on the biological resources present within the Project Area and to determine any potential biological constraints to Project activities.

1.1 Project Location

The approximately 20.96-acre Proposed Project is located within the City of Oroville in Butte County, California (Study Area; Figure 1). The Study Area correspond to portions of "Oroville, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1970). The approximate center of the Study Area is at 39.525576° latitude and -121.576625° longitude and is located within the Honcut Creek-Lower Feather Watershed (Hydrologic Unit Code #18020159; Natural Resources Conservation Service [NRCS], USGS, and U.S. Environmental Protection Agency [USEPA] 2016).

1.2 Project Description

The Project proposes to develop an RV resort facility with accompanying amenities. Proposed developments may include, but are not limited to, RV campsites, two-story rental cabins, welcome center, clubhouse, banquet hall, outdoor pool and spa area, washhouse laundry facility, maintenance building propane refilling station, and recreation facilities.

Prior to any construction, the site will be graded. The Project is also proposing to plant approximately 500 trees and 125 shrubs as part of the landscaping plan. The trees and shrubs range in species and size. A retaining wall is proposed along the east side of the Study Area, spanning the entire length of the parcel.

Additionally, as part of the site construction, the Project proposes to install 12-inch, 15-inch, and 18-inch storm drains. This will involve drop inlets, storm manholes, sanitary sewer lines, water mains, service laterals, gate valves, and blow-off valves and will be installed throughout the site to serve the RV parking pads and amenities.

1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species or their habitat, and sensitive habitats such as riparian and oak woodlands, and potential Waters of the U.S./State, including wetlands, within the Study Area. This assessment does not include determinate field surveys conducted according to agency-promulgated protocols. The conclusions and recommendations presented in this report are based upon a review of the available literature and site reconnaissance.

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);

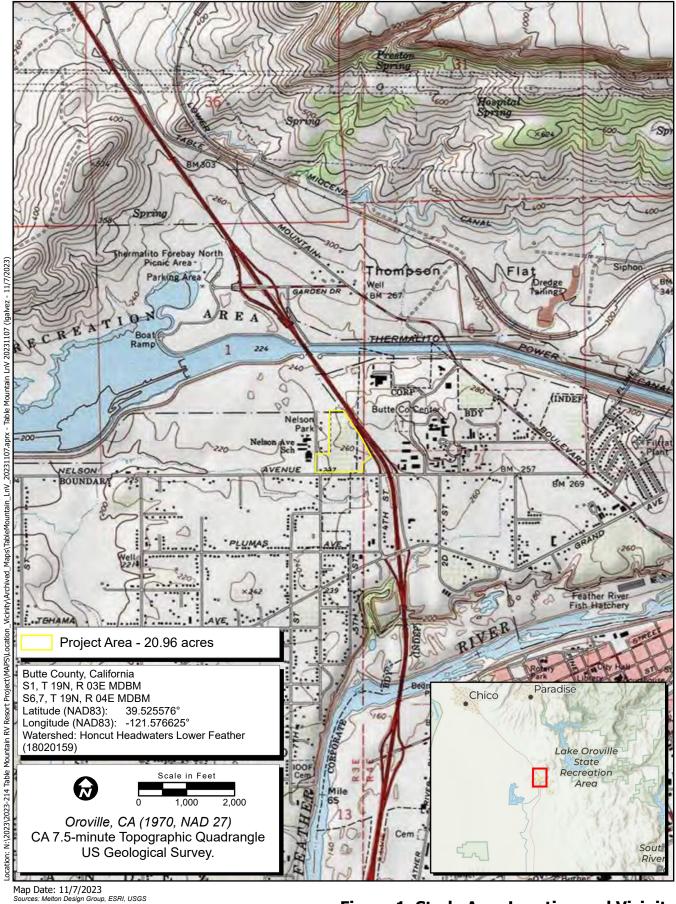


Figure 1. Study Area Location and Vicinity



- 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 California Environmental Quality Act (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 Ranks [CRPR] 1 and 2);
- are plants listed as rare under the California Native Plant Protection Act (NPPA) California Fish and Game Code, Section 1900 et seq.);
- are fully protected in California in accordance with the California Fish and Game Code, Sections 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes); or,
- are identified as a Watch List (WL) species by the CDFW, which "are taxa that were previously Species of Special Concern (SSCs) but do not currently meet SSC criteria, and for which there is concern and a need for additional information to clarify status."

Only species that fall into one of the above-listed groups were considered for this assessment. Other plant species (e.g., CRPR 3 or 4 species) sometimes found in database searches or within the literature were not included in this analysis.

2.0 REGULATORY SETTING

2.1 Federal Regulations

2.1.1 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 the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan (HCP) is developed.

2.1.1.1 Section 7

Section 7 of ESA mandates that all federal agencies consult with USFWS and/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. The adverse modifications will require formal consultation with USFWS or NMFS if direct and/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 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" if adverse effects are likely. The federal agency reviews the BA and prepares a BO if it concludes that the project may adversely affect a listed species or its habitat. The BO may recommend *reasonable and prudent alternatives* to the project to avoid jeopardizing or adversely modifying habitat.

2.1.1.2 Critical Habitat and Essential Habitat

Critical Habitat is defined in Section 3 of ESA as:

- 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.

For inclusion in a Critical Habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first have features that are essential to 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 life cycle needs of the species (areas on which are found the primary constituent elements). Primary constituent elements are the physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include but are not limited to the following:

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

Excluded essential habitat is defined as areas that were found to be essential habitat for the survival of a species and assumed to contain at least one of the primary constituent elements for the species but were excluded from the Critical Habitat designation. The USFWS has stated that any action within the excluded

essential habitat that triggers a federal nexus will be required to undergo the Section 7(a)(1) process, and the species covered under the specific critical habitat designation would be afforded protection under Section 7(a)(2) of ESA.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code.

2.1.3 Federal Clean Water Act

The U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into Waters of the U.S. under Section 404 of the Clean Water Act (CWA). "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to, the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR Section 328.2(f)]. In addition, Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands (over 0.5 acre of impact) may require an individual permit. Projects that only minimally affect wetlands (less than 0.5 acre of impact) may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

On December 22, 2022 the USEPA and Department of the Army (Agencies) announced a final rule defining Waters of the U.S. The definition was founded upon the pre-2015 "Rapanos" decision, updated to reflect consideration of U.S. Supreme Court decisions, the science, and the Agencies' technical expertise. The final rule was published in the Federal Register on January 18, 2023 and effective as of March 20, 2023.

On May 25, 2023 the U.S. Supreme Court adopted a narrower definition of Waters of the U.S. in the case *Sackett v. Environmental Protection Agency*. Under the majority opinion, Waters of the U.S. refers to "geographical features that are described in ordinary parlance as 'streams, oceans, rivers, and lakes' and to

adjacent wetlands that are 'indistinguishable' from those bodies of water due to a continuous surface connection." At this time, it is unclear if or when the Agencies will issue guidance interpreting the U.S. Supreme Court's opinion.

2.2 State or Local Regulations

2.2.1 California Fish and Game Code

2.2.1.1 California Endangered Species Act

The California ESA (California Fish and Game Code Sections 2050-2116) generally parallels the main provisions of the federal ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called *candidates* by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. *Take* is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill," The California ESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the CDFW to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened or candidate species or result in destruction or adverse modification of essential habitat.

2.2.1.2 Fully Protected Species

The State of California first began to designate species as *fully protected* prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the state and/or federal ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code Section 4700 for mammals, 3511 for birds, 5050 for reptiles and amphibians, and 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.1.3 Native Plant Protection Act

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

2.2.1.4 Protected Birds

Sections 3503, 3513, and 3800 of the California Fish and Game Code specifically protects birds. Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Additionally, Subsection 3503.5 prohibits the take, possession, or destruction of any birds and their nests in the orders Strigiformes (owls) or Falconiformes (hawks and eagles). These provisions, along with the federal MBTA, serve to protect birds and their nests. Section 3513 specifically prohibits the take or possession of any migratory nongame bird as designated in the MBTA. 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 commission or a mitigation plan approved by CDFW for mining operations.

2.2.1.5 California Streambed Alteration Notification/Agreement

Section 1602 of the California Fish and Game Code requires that a Streambed Alteration Application (SAA) be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW reviews the proposed actions and, if necessary, submits proposed measures to protect affected fish and wildlife resources to the applicant. The SAA is the final proposal mutually agreed upon by CDFW and the Applicant. Projects that require an SAA often also require a permit from the USACE under Section 404 of the CWA. The conditions of the Section 404 permit and the SAA overlap In these instances.

2.2.2 Species of Special Concern

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

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered, 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 threatened habitats. Project-related impacts to SSC, state-threatened or endangered species are considered significant under CEQA.

2.2.3 Watch List Species

The CDFW maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Depending on the policy of the lead agency, projects that result in substantial impacts to species on the WL may be considered significant under CEQA.

2.2.4 California Rare Plant Ranks

The CNPS maintains the Inventory of Rare and Endangered Plants of California (CNPS 2014), 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 CRPR. 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 California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

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

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 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 (over 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 2014). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, or 2 are typically considered significant under CEQA Guidelines Section 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

2.2.5 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB 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 Requirement for these activities.

2.2.6 California Environmental Quality Act

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

2.2.6.1 CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant and are particularly relevant to SSC. Generally, impacts to listed (rare, threatened, or endangered) species are considered significant and require lead agencies to prepare an Environmental Impact Report to thoroughly analyze and evaluate the impacts. 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, Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study checklist contained in Appendix G of the CEQA Guidelines. Appendix G provides examples of impacts that would normally be considered significant. Based on these examples, impacts to biological resources would normally be considered significant if the project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on federally protected Waters of the U.S. including wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

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

3.0 METHODS

3.1 Literature Review

The following resources were reviewed to determine the special-status species that have been documented within or in the vicinity of the Study Area or that otherwise have the potential to occur onsite:

- CNDDB data for the "Oroville, California" 7.5-minute USGS quadrangle and the surrounding eight USGS quadrangles (CDFW 2023a);
- CNPS' electronic Inventory of Rare and Endangered Plants of California was queried for the "Oroville, California" 7.5-minute USGS quadrangle and the surrounding eight USGS quadrangles (CNPS 2023);
- USFWS Information, Planning, and Consultation (IPaC) System Resource Report List for the Study Area (USFWS 2023a); and,

■ NMFS Resources data for the "Oroville, California" 7.5-minute USGS quadrangle (National Oceanic and Atmospheric Administration [NOAA] 2023)

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

3.2 Site Reconnaissance

ECORP biologist Daniel Machek conducted the reconnaissance-level field survey of the Study Area on October 19, 2023 concurrently with the Aquatic Resources Delineation (ARD) field survey. The methods for the ARD are included in Section 3.2.1 of this report. The reconnaissance survey entailed the biologist walking meandering transects through the Study Area while noting visual observations of biological resources, representative habitats, and vegetation communities within the Study Area. Special attention was given to identifying those portions of the Study Area with the potential to support special-status species and sensitive habitats. During the field survey, vegetation communities occurring within the Study Area were characterized and the following biological resource information was collected:

- Plant and animal species directly observed, or their sign;
- Burrows and any other special habitat features;
- Elderberry (Sambucus nigra ssp. caerulea) shrubs;
- Aquatic resources; and,
- Representative Study Area photographs.

3.2.1 Aquatic Resource Delineation Methods

The ARD was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). Nonwetland waters were identified in the field according to *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), where applicable. The boundaries of aquatic resources were delineated through standard field methods (e.g., paired sample set analyses) and aerial photograph interpretation. Field data were recorded on Wetland Determination Data Forms – Arid West Region and Arid West Ephemeral and Intermittent Streams OHWM Datasheet. *Munsell Soil Color Charts* (Munsell Color 2009) and the Web Soil Survey (NRCS 2023a) were used to aid in identifying hydric soils in the field. The Jepson eFlora (Jepson eFlora Project [eds.] 2022) was used for plant nomenclature and identification.

The field survey was conducted on October 19 and November 8, 2023 by ECORP biologist Dan Machek. The biologist walked the entire Study Area to assess the site conditions of the Study Area and collect ARD data. Aquatic resources within the Study Area were recorded in the field using a post-processing capable Global Positioning System (GPS) unit with submeter accuracy (e.g., Android, Collector for ArcGIS application with Geode GNS3 submeter GPS unit with real-time correction).

3.3 Special-Status Species Considered for the Study Area

Based on species occurrence information from database queries, literature review, and observations in the field, a list of special-status plant and animal species that have the potential to occur within the vicinity of the Study Area was generated and is located in Section 4.6. Each of the species was evaluated for its potential to occur within the Study Area through the database queries, literature review, and field observations, and categorized based on the following criteria:

- **Present** Species was observed during the site visit 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 occurs and/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) and/or the species is not known to occur within the vicinity of the Study Area based on CNDDB records and other documentation.

4.0 RESULTS

4.1 Site Characteristics and Land Use

The Study Area is located within relatively flat to gently rolling terrain situated at an elevational range of approximately 245 to 275 feet above mean sea level (MSL) in the Northern High Sierra Nevada Foothills subregion of the Cascade Range Foothills floristic region of California (Baldwin et al. 2012). The Study Area is comprised of an undeveloped privately owned parcel with access from the south on Nelson Avenue. The adjacent land uses include residential apartments and rural residences to the south, Hearthstone school to the west, and Nelson Park to the north. State Route 70 and the Butte County Superior Court and Sheriff's Office are to the east of the Study Area.

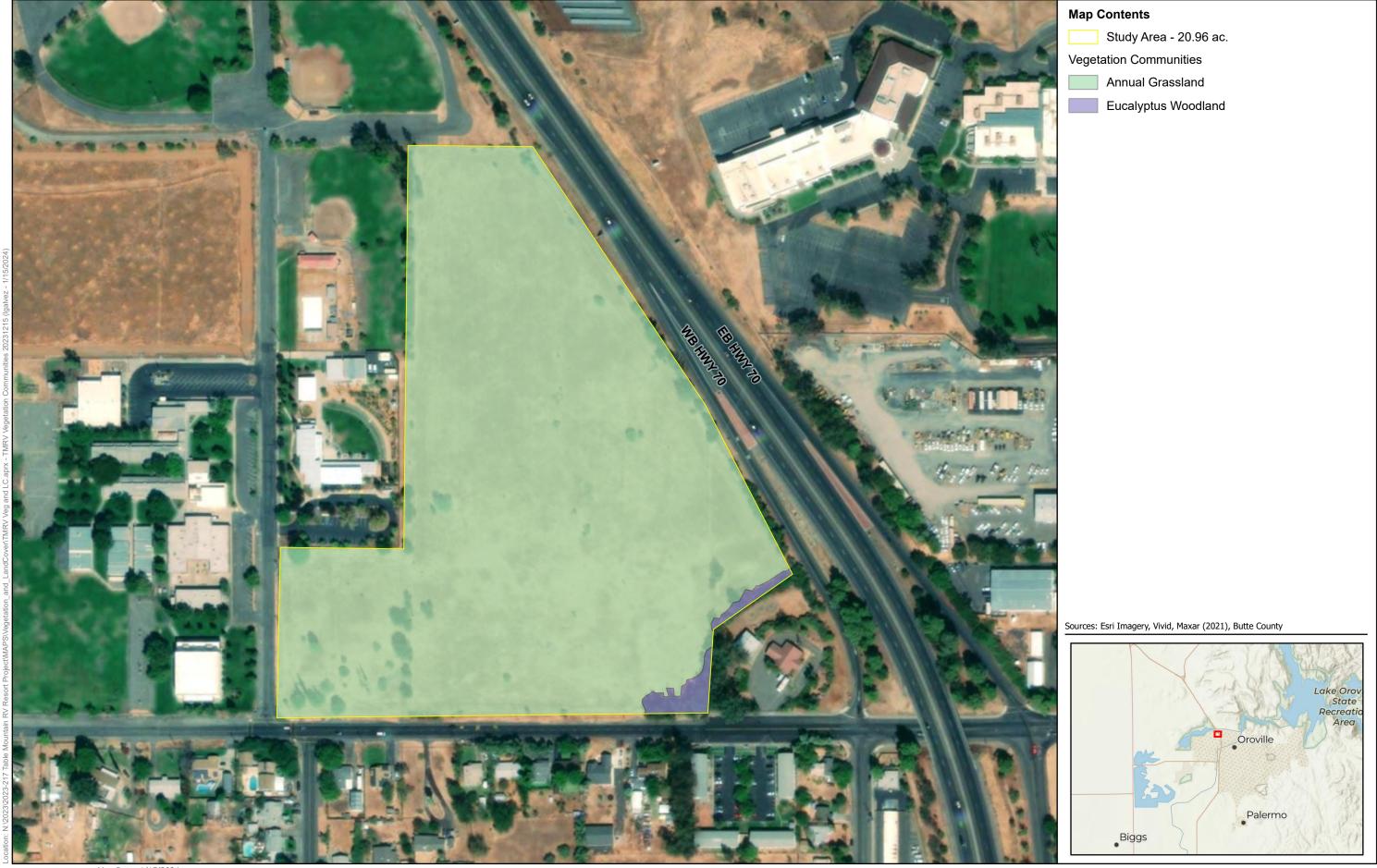
Representative photographs of the Study Area are included in Appendix B.

4.2 Vegetation Communities

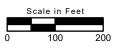
There are two vegetation communities within the proposed Study Area. These are Annual Grassland, and Eucalyptus Woodland (Figure 2). A list of plant species observed during the October 19, 2023 site reconnaissance visit is included in Appendix C.

4.2.1 Annual Grassland

The annual grassland within the Study Area is dominated by nonnative annual grasses including perennial ryegrass (*Festuca perennis*), wild oats (*Avena* sp.), medusahead (*Taeniatherum caput-medusae*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and broadleaf filaree (*Erodium botrys*). Scattered









trees and shrubs occur within the annual grassland. The Study Area was grazed by cattle in the past and has a fire prevention break disced on the eastern border of the Study Area annually.

The annual grassland vegetation community most resembles the *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance as characterized by the Manual of California Vegetation. Seminatural alliances are strongly dominated by nonnative plants that have become naturalized in the state. Annual grasslands occur in the open areas of the Study Area adjacent to disturbed areas such as roads.

4.2.2 Eucalyptus Woodland

The southeast corner of the Study Area is composed of the *Eucalyptus* spp. Woodland Semi-Natural Alliance, a vegetation community dominated by *Eucalyptus* species. Blue gum eucalyptus (*Eucalyptus globulus*) was the dominant tree species in the overstory with European olive (*Olea europaea*) and cherry plum (*Prunus cerasifera*) as shrub and sapling layer. Subdominant shrubs and saplings include Himalayan blackberry (*Rubus armeniacus*), scarlet wisteria (*Sesbania punicea*), northern California black walnut (*Juglans hindsii*), blue oak (*Quercus douglasii*), and interior live oak (*Quercus wislizeni*). Dominant plant species in the herbaceous layer include water pepper (*Persicaria hydropiperoides*), nut sedge (*Cyperus* sp.), soft rush (*Juncus effusus*), and perennial ryegrass (*Festuca perenne*).

4.3 Soils

According to the Web Soil Survey (NRCS 2023a), one soil unit, or type, has been mapped within the Study Area (Figure 3): 318 – Thompsonflat-Oroville, 0 to 9 percent slopes.

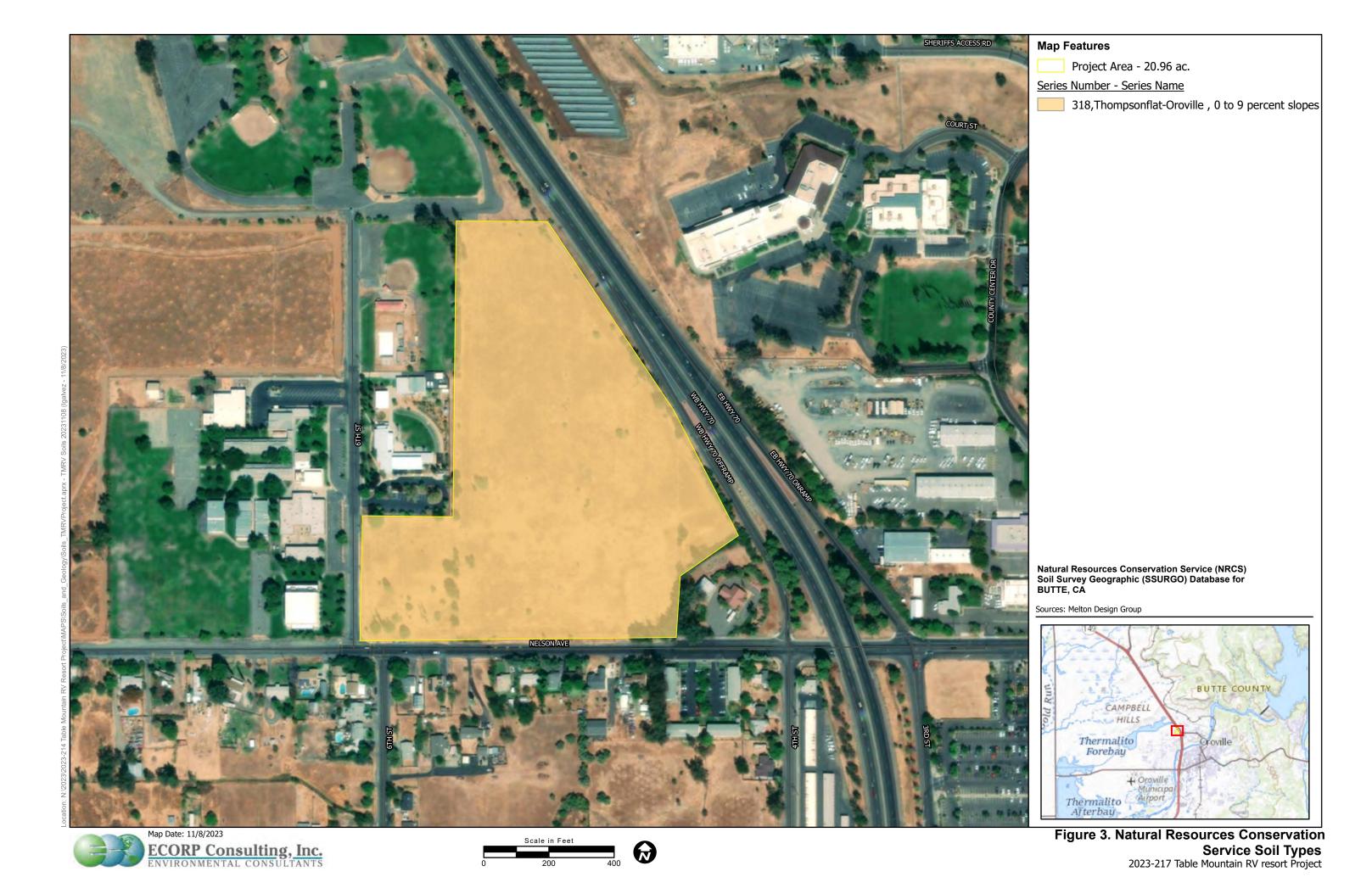
Thompsonflat-Oroville, 0 to 9 percent slopes soil unit is comprised of approximately 50 percent Thompsonflat, fine sandy loam and approximately 40 percent Oroville, gravely fine sandy loam. The remaining 10 percent is composed of the minor components Fernandez, sandy loam; Unnamed, loamy, duripan 10 to 20 inches; and, Unnamed, fine-loamy, bedrock densic 40 to 60 inches. Thompsonflat, fine sandy loam and minor components Fernandez, sandy loam and Unnamed fine-loamy, bedrock densic 40 to 60 inches are not considered hydric. Oroville, gravely fine sandy loam and minor component Unnamed, loamy, duripan 10 to 20 inches are considered hydric (Table 1; NRCS 2023b).

Table 1. Soil Units Occurring within the Study Area ¹							
Soil Unit	Hydric Components ²	Hydric Component Landform					
318 – Thompsonflat-Oroville, 0 to 9 percent slopes	Oroville	Fan remnants					

¹Source: NRCS 2023a ²Source: NRCS 2023b

4.4 Potential Waters of the U.S./State

Aquatic features within the Study Area include vernal pool, seasonal wetland, seasonal wetland swale, and an unnamed intermittent creek. Quantities of types of aquatic resources within the Study Area is included



in Table 2. The ARD has been verified by the USACE in a letter dated January 11, 2023 SPK-2004-00233. Each type of aquatic feature observed within the Study Area is further described below.

Table 2. Aquatic Resources within the Study Area					
Туре	Acreage ¹				
Wetlands:					
Vernal Pool	0.036				
Seasonal Wetland	0.031				
Seasonal Wetland Swale	0.04				
Other Waters:					
Intermittent Creek	0.009				
Total	0.116				

¹The acreage has been verified by the USACE (January 11, 2024 SPK-2004-00233).

4.4.1 Wetlands

4.4.1.1 Vernal Pool

Vernal pools are topographic basins within a grassland community that are typically underlain with an impermeable or semipermeable soil layer near the surface, such as a hardpan or duripan. Direct rainfall and surface runoff inundate the pools during the wet season. The pools typically remain inundated and/or saturated through spring and are dry by late spring through the following wet season.

A total of 0.036-acre vernal pools was mapped within the Study Area (Figure 4). Sampling point 4 was collected within the one vernal pool observed within the Study Area. Dominant plant species with the vernal pool included common spike-rush (*Eleocharis palustris*) and annual rabbit's-foot grass (*Polypogon monspeliensis*).

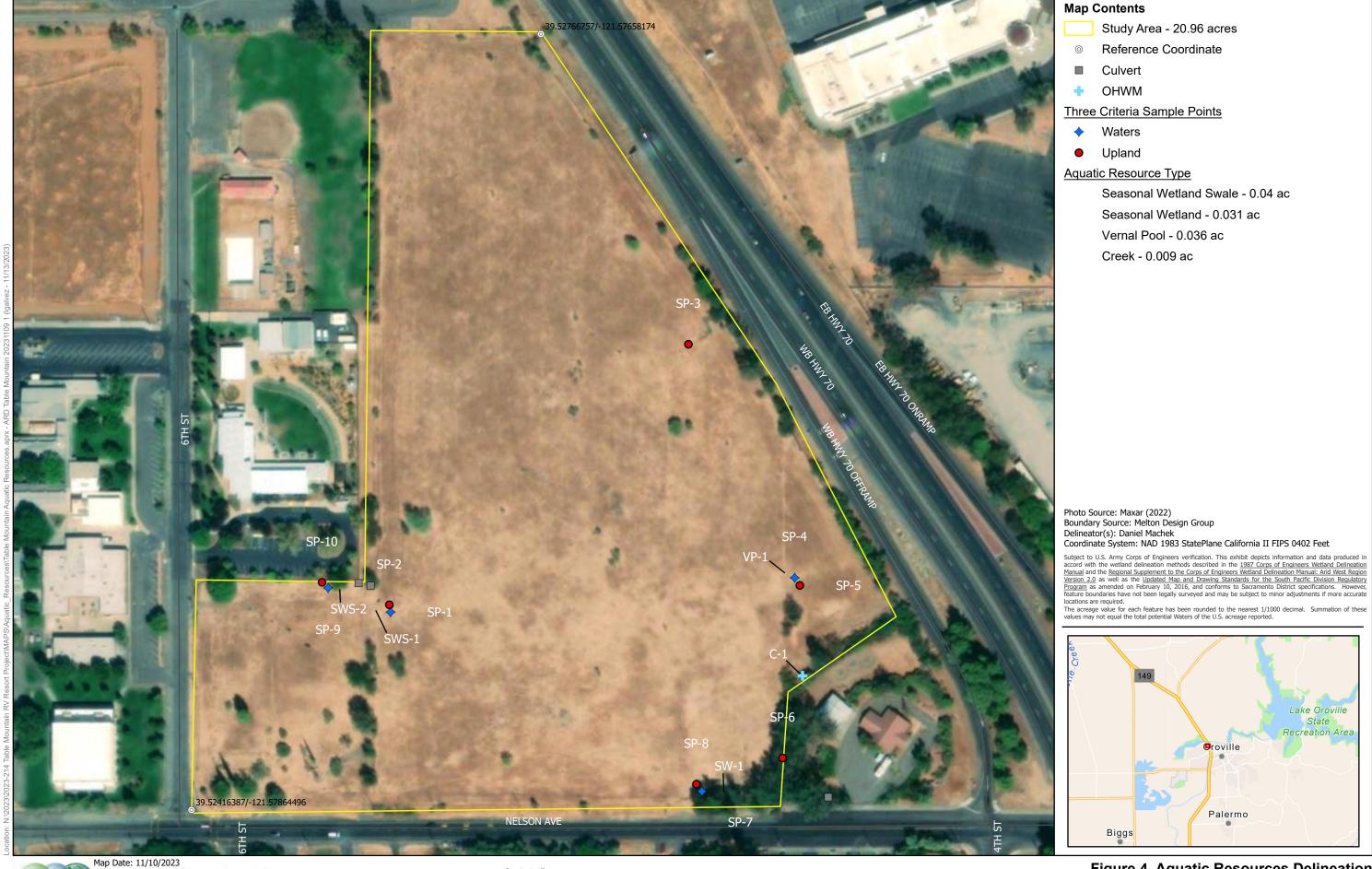
4.4.1.2 Seasonal Wetland

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short and they are commonly dominated by nonnative annual and sometimes perennial hydrophytic species.

A total of 0.031 acre of seasonal wetlands was mapped within the Study Area (Figure 4). Sampling point 7 was taken within the one seasonal wetland observed within the Study Area. Dominant plant species within the seasonal wetland included annual rabbit's-foot grass.

4.4.1.3 Seasonal Wetland Swale

Seasonal wetland swales are generally linear wetland features that convey precipitation runoff and support a predominance of hydrophytic vegetation, hydric soil, and wetland hydrology, but do not exhibit an OHWM. These are typically inundated for short periods during and immediately after rain events, but usually maintain soil saturation for longer periods during the wet season.



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Two seasonal wetland swales (total of 0.04 acre) were delineated within the Study Area (Figure 4). Sampling points 1 and 9 were taken within the seasonal wetland swales. Dominant plant species within the seasonal wetland swales included perennial ryegrass.

4.4.2 Other Waters

4.4.2.1 Intermittent Creek

Intermittent creeks are medium-order creeks that have seasonal surface water flow during the wet or rainy season. Intermittent creeks may not have surface water during dry periods. Runoff from precipitation is a supplemental source of water for stream flow. Intermittent streams often have narrower riparian corridors due to a deeper water table than perennial stream systems.

The unnamed intermittent creek is approximately 2 feet wide within the Study Area and had 1 to 2 inches of flowing water present during the site visit (Figure 4). The biologist mapped 0.009 acre (204 linear feet) of intermittent creek within the Study Area. Dominant plant species observed below the OHWM within the Study Area included water pepper, soft rush, and nutsedge. The unnamed intermittent creek was moderately vegetated above the OHWM within the Study Area. Plant species observed above the OHWM of the unnamed intermittent creek included blue gum eucalyptus, wild olive, and cherry plum in the tree stratum; cherry plum, wild olive, Himalayan blackberry (*Rubus armeniacus*), and red wisteria in the shrub/sapling stratum; and ripgut brome and wild oats in the herbaceous stratum.

4.5 Wildlife Observations

Wildlife observed within or flying over the Study Area during the site reconnaissance visit were recorded by the biologist. A list of wildlife species observed is included as Appendix D.

4.6 Evaluation of Species Identified in the Literature Search

A list of the special-status plant and wildlife species identified in the database inquiries as potentially occurring within the Study Area is provided in Table 3. This table includes the listing status for each species, a brief habitat description, approximate flowering period for plants and survey period for animals, and a determination on the potential to occur in or near the Study Area.

Following the table is a brief description of each special-status species with potential to occur within the Study Area. Species that are categorized only as "Absent" will not be discussed further in this document. An "Absent" determination was concluded for species where the Study Area did not possess suitable habitat, incorrect elevational range, or no other indication that the species would be found in that portion of the Study Area. Species discussions for those categorized as "Potential to Occur" will follow the species table.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Plants		'			
Jepson's onion (Allium jepsonii)	-	-	1B.2	Serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. Elevation: 985'–4,330' Bloom Period: April–August	Absent. No suitable habitat present within the Study Area.
Big-scale balsamroot (Balsamorhiza macrolepis)	-	-	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils. Elevation: 150'–5,100' Bloom Period: March– June	Low potential to occur. The annual grassland within the Study Area presents marginally suitable habitat.
Dissected-leaved toothwort (Cardamine pachystigma var. dissectifolia)	-	-	1B.2	Rocky, usually serpentine soils of chaparral and lower montane coniferous forest. Elevation: 835'–6,890' Bloom Period: February– May	Absent. No suitable habitat present within the Study Area.
Pink creamsacs (Castilleja rubicundula var. rubicundula)	-	-	1B.2	Serpentine substrates in chaparral openings, cismontane woodland, meadows and seeps, and valley and foothill grassland. Elevation: 65'–2,985' Bloom Period: April–June	Absent. No serpentine soils present within the Study Area (Horton 2017; Jennings et al. 1977).
White-stemmed clarkia (Clarkia gracilis ssp. albicaulis)	-	-	1B.2	Sometimes serpentine soils of chaparral and cismontane woodland. Elevation: 805'–3,560' Bloom Period: May–July	Absent. No suitable habitat present within the Study Area.
Mildred's clarkia (Clarkia mildrediae ssp. mildrediae)	-	-	1B.3	Sandy, usually granitic soils of cismontane woodland and lower montane coniferous forest. Elevation: 805'–5,610' Bloom Period: May– August	Absent. No suitable habitat present within the Study Area.

Common Name		Status		Habitat Description	
(Scientific Name)	FESA	CESA	Other		Potential to Occur Onsite
Mosquin's clarkia (Clarkia mosquinii)	-	-	1B.1	Rocky soils and roadsides of cismontane woodland and lower montane coniferous forest. Elevation: 605'–4,890' Bloom Period: May–July	Absent. No suitable habitat present within the Study Area
Recurved larkspur (Delphinium recurvatum)	-	-	1B.2	Alkaline habitats within chenopod scrub, cismontane woodland, and valley and foothill grasslands. Elevation: 10'–2,590' Bloom Period: March–June	Absent. No alkaline habitats present within the Study Area
Ahart's buckwheat (Eriogonum umbellatum var. ahartii)	-	-	1B.2	Serpentine soils, slopes, and openings of chaparral and cismontane woodland. Elevation: 1,310'–6,560' Bloom Period: June– September	Absent. No suitable habitat present within the Study Area
Fern-leaved monkeyflower (<i>Erythranthe filicifolia</i>)	-	-	1B.2	Usually slow–draining, ephemeral seeps among exfoliating granitic slabs of chaparral, lower montane coniferous forest, and ephemeral meadows and seeps. Elevation: 1,360′–5,610′ Bloom Period: April–June	Absent. No suitable habitat present within the Study Area
Hoover's spurge (Euphorbia hooveri)	FT	-	1B.2	Vernal pools. Elevation: 80'–820' Bloom Period: July– September	Potential to occur. The vernal pools within the Study Area present suitable habitat.
Adobe lily (Fritillaria pluriflora)	-	-	1B.2	Adobe soils in chaparral, cismontane woodland, and valley and foothill grassland. Elevation: 195'–2,315' Bloom Period: February–April	Low potential. Analogous adobe soil components and horizons within the Study Area present marginally suitable habitat.
Woolly rose-mallow (Hibiscus lasiocarpos var. occidentalis)	-	-	1B.2	Marshes and freshwater swamps. Often in riprap on sides of levees. Elevation: 0'–395' Bloom Period: June– September	Absent. No suitable habitat present within the Study Area

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Ahart's dwarf rush (Juncus leiospermus var. ahartii)	-	-	1B.2	Mesic areas in valley and foothill grassland. Species has an affinity for slight disturbance such as farmed fields (USFWS 2005). Elevation: 100'–750' Bloom Period: March–May	Potential to occur. The vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide marginally suitable habitat.
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. Elevation: 115'–4,100' Bloom Period: March– June	Potential to occur. The vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide suitable habitat.
Colusa layia (Layia septentrionalis)	-	-	1B.2	Sandy or serpentine soils in chaparral, cismontane woodland, and valley and foothill grasslands. Elevation: 330'–3,595' Bloom Period: April–May	Absent. No suitable soils present within the Study Area.
Butte County meadowfoam (<i>Limnanthes floccosa</i> ssp. <i>californica</i>)	FE	CE	1B.1	Mesic valley and foothill grassland and vernal pools. Elevation: 150'–3,050' Bloom Period: March–May	Potential to occur. The vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide suitable habitat.
Veiny monardella (Monardella venosa)	-	-	1B.1	Heavy clay soils in cismontane woodland and valley and foothill grasslands. Elevation: 195'–1,345' Bloom Period: May–July	Absent. No suitable soils present within the Study Area.
Slender Orcutt grass (Orcuttia tenuis)	FT	CE	1B.1	Vernal pools, often gravelly. Elevation: 115'–5,775' Bloom Period: May– September	Potential to occur. The vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide suitable habitat.
Lewis Rose's ragwort (Packera eurycephala var. lewisrosei)	-	-	1B.2	Serpentine soils of chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 900'–6,200' Bloom Period: March–July	Absent. No suitable habitat present within the Study Area.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Ahart's paronychia (Paronychia ahartii)	_	-	1B.1	Well-drained rocky outcrops, often vernal pool edges, and volcanic upland (Hartman and Rabeler 2012) of cismontane woodland, valley and foothill grassland, and vernal pools. Elevation: 100'–1,675' Bloom Period: February–June	Potential to occur. The annual grassland, vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide suitable habitat.
Sierra blue grass (Poa sierrae)	-	-	1B.3	Lower montane coniferous forest openings. Elevation: 1,200'–4,920' Bloom Period: April–July	Absent. No suitable habitat present within the Study Area.
Sanford's arrowhead (Sagittaria sanfordii)	-	-	1B.2	Shallow marshes and freshwater swamps. Elevation: 0'–2,135' Bloom Period: May– October	Absent. No suitable habitat present within the Study Area.
Butte County checkerbloom (Sidalcea robusta)	_	-	1B.2	Chaparral and cismontane woodland. Elevation: 295'–5,250' Bloom Period: April–June	Absent. No suitable habitat present within the Study Area.
Butte County golden clover (<i>Trifolium jokerstii</i>)	-	-	1B.2	Mesic valley and foothill grassland and vernal pools. Elevation: 165'–1,575' Bloom Period: March–May	Potential to occur. The vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide suitable habitat.
Greene's tuctoria (Tuctoria greenei)	FE	CR	1B.1	Vernal pools. Elevation: 100'–3,510' Bloom Period: May–July	Potential to occur. The vernal pools, seasonal wetlands, and seasonal wetland swales within the Study Area provide suitable habitat.
Brazilian watermeal (Wolffia brasiliensis)	-	-	2B.3	Assorted shallow freshwater marshes and swamps. Elevation: 65'–330' Bloom Period: April– December	Absent. No suitable habitat present within the Study Area.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Invertebrates		'			,
Conservancy fairy shrimp (<i>Branchinecta</i> conservatio)	FE	_	-	Vernal pools/wetlands. Survey Period: November- April when surface water is present.	Absent. The vernal pool and wetlands within the Study Area are not large enough and would not have a long ponding duration capable of supporting this species.
Vernal pool fairy shrimp (Branchinecta lynchi)	FT	-	_	Vernal pools/wetlands. Survey Period: November–April when surface water is present.	Potential to occur. The vernal pool and seasonal wetland within the Study Area provide suitable habitat for this species.
Crotch bumble bee (Bombus crotchii)	ı	СС	-	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico. Survey Period: March- September	Potential to occur. The open annual grassland within the Study Area provides suitable habitat for this species.
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. Survey Period: April-November	Absent. Study Area is outside of the current known range fo this species.
Vernal pool tadpole shrimp (<i>Lepidurus packardi</i>)	FE	_	-	Vernal pools/wetlands. Survey Period: November–April when surface water is present.	Potential to occur. The vernal pool and seasonal wetland within the Study Area provide suitable habitat for this species.
Valley elderberry longhorn beetle (Desmocerus californicus dimorphus)	FT	-	-	Elderberry shrubs.	Absent. No elderberry shrubs are present within the Study Area.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Monarch butterfly (Danaus plexippus)	FC		_	Adult monarchs west of the Rocky Mountains typically overwinter in sheltered wooded groves of Monterey pine, Monterey cypress, and gum eucalyptus along coastal California, then disperse in spring throughout California, Nevada, Arizona, and parts of Oregon and Washington. Adults require milkweed and additional nectar sources during the breeding season. Larval caterpillars feed exclusively on milkweed.	Absent. There are no known overwintering sites and no milkweed were observed within the Study Area.
Fish					
Green sturgeon - southern DPS (Acipenser medirostris pop. 1)	FT	-	-	Anadromous; undammed cold-water rivers having relatively deep pools with large substrates.	Absent. There is no suitable aquatic habitat present within the Study Area.
Steelhead (CA Central Valley DPS) (Oncorhynchus mykiss irideus)	FT	-	-	Fast-flowing, well- oxygenated rivers and streams below dams in the Sacramento and San Joaquin River systems. Survey Period: N/A	Absent. There is no suitable aquatic habitat present within the Study Area.
Chinook salmon - Central Valley spring- run Evolutionarily Significant Unit (ESU)	FT	СТ	-	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems	Absent. There is no suitable aquatic habitat present within the Study Area.
(Oncorhynchus tshawytscha)					

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Amphibian				<u> </u>	
Foothill yellow-legged frog Feather River Clade (<i>Rana boylii</i>)	FT	СТ	SSC	Partly shaded shallow streams and riffles in variety of habitats. Needs cobble-sized substrate for egg-laying and at least 15 weeks of permanent water to attain metamorphosis. Can be active all year in warmer locations; become inactive or hibernate in colder climates. Feather River watershed above Oroville. Survey Period: May—October.	Absent. Study Area is within the lower Feather River, outside of where the species is known to occur, which is upstream of Lake Oroville.
California red-legged frog (<i>Rana draytonii</i>)	FT		SSC	Lowlands and foothills of the northern and southern Coast Ranges and Sierra Nevada. Found in deep standing or flowing water with dense shrubby or emergent riparian vegetation; requires 11-20 weeks of permanent water for larval development. Adults require aestivation habitat to endure summer dry down. Survey Period: January – Sept.	Absent. Study Area is surrounded by a modified landscape and is isolated from quality habitat and is outside of current known range for the species.
Western spadefoot Northern DPS (Spea hammondii)	-	-	SSC	California endemic species of vernal pools, swales, and seasonal wetlands in grassland, scrub and woodland habitats throughout the Central Valley and South Coast Ranges. Prefers open areas with sandy or gravelly soils. Survey Period: Winter-Spring.	Potential to occur. The vernal pool, swales, and seasonal wetland in the Study Area provide suitable habitat.

Common Name	Status				
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Reptiles					
Northwestern pond turtle (Actinemys marmorata)	FPT	-	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. Survey Period: April- September	Absent. There are no suitable aquatic features within the Study Area with sufficient depth to support this species.
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. In the northern Sacramento area, this species appears restricted to the foothills between 1,000 to 3,000 feet from Cameron Park (El Dorado County) north and west to Grass Valley and Nevada City. Survey Period: April-October	Low potential to occur. The open grassland with scattered shrubs and loamy soil provide marginally suitable habitat for this species and is below the typical elevation this species is found in the Study Area region.
Giant garter snake (Thamnophis gigas)	FT	СТ	_	Freshwater ditches, sloughs, and marshes in the Central Valley. Almost extirpated from the southern parts of its range. Survey Period: April- October	Absent. The creek in the Study Area is within a Eucalyptus woodland and is unsuitable habitat for GGS.

Common Name		Status		Habitat Description	
(Scientific Name)	FESA	CESA	Other		Potential to Occur Onsite
Birds					
Western grebe (Aechmophorus occidentalis)	-	-	ВСС	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Nests on freshwater lakes and marshes with open water bordered by emergent vegetation. Nesting: June-August	Absent. There is no suitable habitat within the Study Area.
Clark's grebe (Aechmophorus clarkii)	-		ВСС	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Breeds on freshwater to brackish marshes, lakes, reservoirs and ponds, with a preference for large stretches of open water fringed with emergent vegetation. Nesting: June-August	Absent. There is no suitable habitat within the Study Area.
Yellow-billed cuckoo (Coccyzus americanus)	FT	CE		Breeding habitat is generally open woodland with clearings and low, dense, scrubby vegetation associated with watercourses, and includes desert riparian woodlands with willow, Fremont's cottonwood, alder, walnut, box-elder, and dense mesquite. Nests are generally found in deciduous hardwoods with thick bushes, vines, or hedgerows providing dense foliage within 10 meters (33 feet) of ground; prefer riparian patches of at least 81 hectares (200 acres). Winters in South America. Nesting: June 15-August 15	Absent. There is no suitable habitat within the Study Area.

Common Name	Status				
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
California black rail (Laterallus jamaicensis coturniculus)	-	СТ	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). Nesting: March- September	Absent. There is no suitable habitat within the Study Area.
Greater sandhill crane (Antigone canadensis tabida)	-	СТ	CFP	Breeds in NE California, Nevada, Oregon, Washington, and BC, Canada; winters from CA to Florida. In winter, they forage in burned grasslands, pastures, and feed on waste grain in a variety of agricultural settings (corn, wheat, milo, rice, oats, and barley), tilled fields, recently planted fields, alfalfa fields, row crops and burned rice fields. Nesting: March-August Wintering: September- March	Absent. There is no suitable wintering habitat within the Study Area.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Willet (Tringa semipalmata)	_	_	ВСС	Breeds locally in interior of western North America. In California, breeding range includes the Klamath Basin and Modoc	Absent. There is no suitable breeding habitat within the Study Area.
				Plateau and portions of Mono and possibly Inyo counties. Breeding habitat includes prairies, Breeds in wetlands and	
				grasslands on semiarid plains; in uplands near brackish or saline wetlands; prefers	
				temporary, seasonal, and alkali wetlands over semipermanent and	
				permanent wetlands. Nesting: April-August	
California gull (nesting colony)	_	-	BCC, CDFW WL	Nesting occurs in the Great Basin, Great Plains,	Absent. There is no suitable breeding habitat within the
(Larus californicus)				Mono Lake, and south San Francisco Bay. Breeding colonies located on islands on natural	Study Area.
				lakes, rivers, or reservoirs. Winters along Pacific Coast from southern	
				British Columbia south to Baja California and Mexico. In California,	
				winters along coast and inland (Central Valley, Salton Sea). Nesting: April-August	
Black tern	_	-	BCC, SSC	Breeding range includes northeastern California,	Absent. There is no suitable breeding habitat within the
(Chlidonias niger)				Central Valley, Great Plains of U.S. and Canada; winters in Central and	Study Area.
				South America; nesting habitat includes shallow freshwater marsh with	
				emergent vegetation, prairie sloughs, lake margins, river islands, and	
				cultivated rice fields. Nesting: May-August	

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
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. Nest in large trees, snags, cliffs, transmission/communication towers, artificial nest platforms, channel markers/buoys. Nesting: April-September	Low potential to occur. The Study Area is in close proximity to a roadside setting, which creates marginally suitable habitat.
Golden eagle (Aquila chrysaetos)	_		CFP, CDFW WL	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/savannah, and chaparral. Nesting occurs on cliff ledges, river banks, trees, and human-made structures (e.g., windmills, platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during Winter. Nesting: February-August Wintering in Central Valley: October-February	Absent. There is no suitable breeding or wintering habitat.
Northern harrier (Circus hudsonius)	-	_	BCC, SSC	Nests on the ground in open wetlands, marshy meadows, wet/lightly grazed pastures, (rarely) freshwater/brackish marshes, tundra, grasslands, prairies, croplands, desert, shrubsteppe, and (rarely) riparian woodland communities. Nesting: April-September	Absent. There is no suitable nesting habitat within the Study Area.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Bald eagle (Haliaeetus leucocephalus)	Delisted	CE	CFP	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands. Nesting: February-September Wintering: October-March	Absent. The Study Area is in an open roadside setting.
Swainson's hawk (Buteo swainsoni)	-	СТ	-	Nesting occurs in trees in agricultural, riparian, oak woodland, scrub, and urban landscapes. Forages over grassland, agricultural lands, particularly during disking/harvesting, irrigated pastures. Nesting: March-August	Potential to occur. There is suitable breeding and foraging habitat onsite.
Burrowing owl (Athene cunicularia)	_	_	BCC, SSC	Nests in burrows or burrow surrogates in open, treeless, areas within grassland, steppe, and desert biomes. Often with other burrowing mammals (e.g., prairie dogs, California ground squirrels). May also use human-made habitat such as agricultural fields, golf courses, cemeteries, roadside, airports, vacant urban lots, and fairgrounds. Nesting: February-August	Low potential to occur. The annual grassland within the Study Area provides marginally suitable habitat due to scattered trees within the grassland. No California ground squirrels or their burrows, or any other burrow surrogates were observed during the site reconnaissance
Nuttall's woodpecker (Dryobates nuttallii)	-	-	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands. Nesting: April-July	Absent. There are no suitably large oaks for breeding habita within the Study Area.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Least Bell's vireo (Vireo bellii pusillus)	FE	CE	_	In California, breeding range includes Ventura, Los Angeles, Riverside, Orange, San Diego, and San Bernardino counties, and rarely Stanislaus and Santa Clara counties. Nesting habitat includes dense, low shrubby vegetation in riparian areas, brushy fields, young second-growth woodland, scrub oak, coastal chaparral and mesquite brushland. Winters in southern Baja California Sur.	Absent. There is limited suitable breeding habitat in the Study Area. The Study Area is not within the current breeding range of this species, and a siting of one onsite or in the vicinity would be considered extremely rare.
Loggerhead shrike (Lanius ludovicianus)	_	-	SSC	Found throughout California in open country with short vegetation, pastures, old orchards, grasslands, agricultural areas, open woodlands. Not found in heavily forested habitats. Nesting: March-July	Potential to occur. The annual grasslands within the Study Area are suitable habitat.
Yellow-billed magpie (<i>Pica nuttallii</i>)	_		ВСС	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings. Nesting: April-June	Potential to occur. There is suitable breeding habitat within the Study Area.

Common Name	Status				
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Oak titmouse (Baeolophus inornatus)	-	-	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree). Nesting: March-July	Potential to occur. There is suitable breeding habitat onsite.
Bank swallow (Riparia riparia)	-	СТ	-	Nests colonially along coasts, rivers, streams, lakes, reservoirs, and wetlands in vertical banks, cliffs, and bluffs in alluvial, friable soils. May also nest in sand, gravel quarries and road cuts. In California, breeding range includes northern and central California. Nesting: May-July	Absent. There is no suitable bank/breeding habitat within the Study Area.
Wrentit (Chamaea fasciata)	-	-	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens. Nesting: March-August	Potential to occur. The shrubs in the understory of the Eucalyptus woodland within the Study Area provide suitable breeding habitat.

Common Name	Status				
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Lawrence's goldfinch	-	_	ВСС	Breeds in Sierra Nevada	Potential to occur. There is
				and inner Coast Range	suitable breeding habitat
(Spinus lawrencei)				foothills surrounding the	onsite.
				Central Valley and the	
				southern Coast Range to	
				Santa Barbara County east	
				through southern	
				California to the Mojave	
				Desert and Colorado	
				Desert into the Peninsular	
				Range. Nests in arid and	
				open woodlands with	
				chaparral or other brushy	
				areas, tall annual weed	
				fields, and a water source	
				(e.g. small stream, pond,	
				lake), and to a lesser	
				extent riparian woodland,	
				coastal scrub, evergreen	
				forests, pinyon-juniper	
				woodland, planted	
				conifers, and ranches or	
				rural residences near	
				weedy fields and water.	
				Nesting: March-	
				September	
Belding's savannah	_	CE	BCC	Resident coastally from	Absent. There is no suitable
sparrow				Point Conception south	breeding habitat, and this
				into Baja California;	subspecies is found in coastal
(Passerculus				coastal salt marsh.	habitats.
sandwichensis				Year-round resident; nests	
beldingi)				March-August	

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Tricolored blackbird	_	СТ	BCC, SSC	Breeds locally west of	Potential to occur. The
				Cascade-Sierra Nevada	blackberry brambles adjacent
(Agelaius tricolor)				and southeastern deserts	to the creek and annual
				from Humboldt and	grassland within the Study
				Shasta counties south to	Area provide suitable breeding
				San Bernardino, Riverside	habitat.
				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. Nesting: March-August	
Bullock's oriole	_	_	ВСС	Breeding habitat includes	Potential to occur. There is
bullock's Officie		_	ВСС	riparian and oak	suitable breeding habitat in
(Icterus bullockii)				woodlands.	the Eucalyptus woodland
(,				Nesting: March-July	within the Study Area.
Yellow warbler	_	_	SSC	Breeding range includes	Absent. Yellow warbler is a
				most of California, except	migrant in the Central Valley.
(Setophaga petechia)				Central Valley (isolated	
				breeding locales on Valley	
				floor, Stanislaus, Colusa,	
				and Butte counties), Sierra	
				Nevada range above tree	
				line, and southeastern	
				deserts. Nesting habitat includes riparian	
				vegetation near streams	
				and meadows. Winters in	
				Mexico south to South	
				America.	
		1		Nesting: May-August	

Common Name	Status				
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
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. Survey Period: April-September	Potential to occur. The trees with cavities within the Study Area are suitable day roosting habitat.
Townsend's big-eared bat (Corynorhinus townsendii)	-		SSC	Occurs throughout the west and is distributed from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains, with isolated populations occurring in the central and eastern United States. It has been reported in a wide variety of habitat types ranging from sea level to 3,300 meters. Habitat associations include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Roosting can occur within caves, mines, buildings, rock crevices, trees. Survey Period: April-September	Potential to occur. The trees with cavities within the Study Area are suitable day roosting habitat.

Common Name		Status			
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite
Western mastiff bat (Eumops perotis californicus)	-	_	SSC	Primarily a cliff-dwelling species, found in similar crevices in large boulders and buildings. Survey Period: April- September	Absent- No suitable habitat is present within the Study Area.
Western red bat	_	_	SSC	Roosts in foliage of trees or shrubs; Day roosts are	Potential to occur. The trees and shrubs within the Study
(Lasiurus frantzii)				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) Survey Period: April-September	Area provide suitable day roosting habitat.
American badger	_	_	SSC	Drier open stages of most shrub, forest, and	Absent. The Study Area is bounded on four sides by
(Taxidea taxus)				herbaceous habitats with friable soils. Survey Period: Any season	development. American badger requires larger open undeveloped areas.

. .	~ .
\tatiic	Codes:
Jiaius	Coues.

Status Coucs.	
FESA	Federal Endangered Species Act
CESA	California Endangered Species Act
FE	FESA listed, Endangered
FT	FESA listed, Threatened
FPT	Formally Proposed for FESA listing as Threatened
BCC	USFWS Bird of Conservation Concern (USFWS 2021)
CE	CESA- or NPPA-listed, Endangered
CT	CESA- or NPPA-listed, Threatened
CR	CESA- or NPPA-listed, Rare
CC	Candidate for CESA listing as Endangered or Threatened
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5050-
	reptiles/amphibians)
SSC	CDFW Species of Special Concern
CDFW WL	CDFW Watch List
1B	CRPR/Rare or Endangered in California and elsewhere
2B	CRPR/Plants rare, threatened, or endangered in California but more common elsewhere
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)

Table 3. Evaluation of Special-Status Species' Potential to Occur within the Study Area							
Common Name	Status						
(Scientific Name)	FESA	CESA	Other	Habitat Description	Potential to Occur Onsite		

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

Notes: °C = Degrees Celsius; CDFW = California Department of Fish and Wildlife; DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit; km = kilometer; N/A = Not Applicable; NRCS = Natural

Resources Conservation Service; USFWS = U.S. Fish and Wildlife Service

4.6.1 Plants

A total of 27 special-status plant species were identified as having the potential to occur within the vicinity of the Study Area based on the literature review and database inquiries (Table 3). Seventeen of the 22 special-status plant species were determined to be absent from the Study Area due to a lack of suitable habitat within the Study Area. No further discussion of the species considered to be absent from the Study Area is provided in this assessment. The 10 plant species with the potential to occur within the Study Area are described below.

4.6.1.1 Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grassland, and sometimes on serpentinite soils. Big-scale balsamroot blooms from March through June and is known to occur at elevations ranging from 150 to 5,100 feet above MSL. Big-scale balsamroot is endemic to California; the current range of this species includes Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2023).

There are no CNDDB occurrences of big-scale balsamroot within 5 miles of the Study Area (CDFW 2023a). The annual grassland within the Study Area provides marginally suitable habitat for this species. Big-scale balsamroot has a low potential to occur within the Study Area.

4.6.1.2 Hoover's Spurge

Hoover's spurge (*Euphorbia hooveri*) is listed as threatened pursuant to the federal ESA, not listed pursuant to the California ESA, and is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in vernal pools. Hoover's spurge blooms from July through September (sometimes October) and is known to occur at elevations ranging from 80 to 820 feet above MSL. Hoover's spurge is endemic to California; its current range includes Butte, Glenn, Merced, Stanislaus, Tehama, and Tulare counties (CNPS 2023).

There are no CNDDB occurrences of Hoover's spurge within 5 miles of the Study Area (CDFW 2023a). The vernal pool within the Study Area provides suitable habitat for this species. Hoover's spurge has potential to occur within the Study Area.

4.6.1.3 Adobe Lily

Adobe lily (*Fritillaria pluriflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial bulbiferous herb that often occurs on adobe soils in chaparral, cismontane woodland, and valley and foothill grassland. Adobe lily blooms from February through April and is known to occur from 195 to 2,315 feet above MSL. Adobe lily is endemic to California; the current range of this species includes Butte, Colusa, Glenn, Lake, Napa, Solano, Tehama, and Yolo counties (CNPS 2023).

There are no CNDDB occurrences of adobe lily within 5 miles of the Study Area (CDFW 2023a). The analogous adobe soil components and horizons within the Study Area represent marginally suitable habitat for this species. Adobe lily has a low potential to occur within the Study Area.

4.6.1.4 Ahart's Dwarf Rush

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in mesic areas in valley and foothill grasslands. This species also appears to have an affinity for slight disturbance since it has been found on farmed fields and gopher turnings (USFWS 2005). Ahart's dwarf rush blooms from March through May and is known to occur at elevations ranging from 100 to 750 feet above MSL (USFWS 2005). Ahart's dwarf rush is endemic to California; the current range of this species includes Butte, Calaveras, Placer, Sacramento, Tehama, and Yuba counties (CNPS 2023).

There is one CNDDB occurrence of Ahart's dwarf rush within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Ahart's dwarf rush has the potential to occur within the Study Area.

4.6.1.5 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. Red Bluff dwarf rush blooms from March through June and is known to occur at elevations ranging from 115 to 4,100 feet above MSL. Red Bluff dwarf rush is endemic to California; the current range of this species includes Butte, Placer, Shasta, and Tehama counties (CNPS 2023).

There are 15 CNDDB occurrences of Red Bluff Dwarf Rush within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Red bluff dwarf rush has the potential to occur within the Study Area.

4.6.1.6 Butte County Meadowfoam

Butte County meadowfoam (*Limnanthes floccosa* ssp. *californica*) is listed as endangered pursuant to both the federal and California ESAs, and is designated as a CRPR 1B.1 species. Butte County meadowfoam is an herbaceous annual that occurs in vernal pools and mesic areas of valley and foothill grasslands. Butte

County meadowfoam blooms from March through May and is known to occur at elevations between 150 to 3,050 feet above MSL. Butte County meadowfoam is endemic to California; the current known range for this species is Butte County (CNPS 2023).

There are two CNDDB occurrences of Butte County meadowfoam within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Butte County meadowfoam has the potential to occur within the Study Area.

4.6.1.7 Slender Orcutt Grass

Slender Orcutt grass (*Orcuttia tenuis*) is listed as threatened pursuant to the federal ESA, as endangered pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in often gravelly soils in vernal pools primarily on substrates of volcanic origin (Crampton 1959; Corbin and Schoolcraft 1989; as cited in USFWS 2005). This species is known to occur in the same type of vernal pool complexes as Sacramento Orcutt grass in Sacramento County; however, these species have not been observed coexisting in the same vernal pool (USFWS 2005). The median area of pools occupied by populations studied by Stone et al. (1988, as cited in USFWS 2005) was 1.6 acres and ranged from 0.2 to 111.0 acres (USFWS 2005). Slender Orcutt grass blooms from May through September (sometimes October) and is known to occur at elevations ranging from 115 to 5,775 feet above MSL. Slender Orcutt grass is endemic to California; the current range for this species includes Butte, Lake, Lassen, Modoc, Plumas, Sacramento, Shasta, Siskiyou, and Tehama counties (CNPS 2023).

There are two CNDDB occurrences of slender Orcutt grass within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, and seasonal wetland swale within the Study Area provide suitable habitat for this species. Slender Orcutt grass has the potential to occur within the Study Area.

4.6.1.8 Ahart's Paronychia

Ahart's paronychia (*Paronychia ahartii*) is not listed as pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.1 species. Ahart's paronychia is an annual herb that occurs in cismontane woodland, valley foothill and grassland and vernal pools. Ahart's paronychia blooms from February through June and is known to occur at elevations ranging from 100 to 1,675 feet above MSL. Ahart's paronychia is endemic to California; the current range of this species includes Butte, Shasta, and Tehama counties (CNPS 2023).

There are two CNDDB occurrences of Ahart's paronychia within 5 miles of the Study Area (CDFW 2023a). The annual grassland, vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Ahart's paronychia has potential to occur within the Study Area.

4.6.1.9 Butte County Golden Clover

Butte County golden clover (*Trifolium jokerstii*) is not listed pursuant to the federal and California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous annual that occurs in vernal pools and mesic areas in valley and foothill grassland. Butte County golden clover blooms from March through

May and is known to occur at elevations ranging from 165 to 1,575 feet above MSL. Butte County golden clover is endemic to California; its current range is Butte County (CNPS 2023).

There are eight CNDDB occurrences of Butte County golden clover within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Butte County golden clover has the potential to occur within the Study Area.

4.6.1.10 Greene's Tuctoria

Greene's tuctoria (*Tuctoria greenei*) is listed endangered pursuant to the federal ESA, listed as rare pursuant to the California ESA, and is designated as a CRPR 1B.1 species. This species is an herbaceous annual that occurs in vernal pools. Greene's tuctoria blooms from May through July and is known to occur at elevations ranging from 100 to 3,510 feet above MSL. Greene's tuctoria is endemic to California; the current range of this species includes Butte, Fresno, Glenn, Madera, Merced, Modoc, Shasta, San Joaquin, Stanislaus, Tehama, and Tulare counties. It is considered extirpated from Fresno, Madera, San Joaquin, Stanislaus, and Tulare counties (CNPS 2023).

There is one CNDDB occurrence of Greene's tuctoria within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area provide suitable habitat for this species. Greene's tuctoria has the potential to occur within the Study Area.

4.6.2 Invertebrates

A total of seven special-status invertebrate species were identified as having the potential to occur within the vicinity of the Study Area based on the database inquiries and literature review (Table 3). Four of the seven special-status invertebrate species were determined to be absent from the Study Area due to a lack of suitable habitat within the Study Area. No further discussion of the species considered to be absent from the Study Area is provided in this assessment. Three of the invertebrate species that have the potential to occur within the Study Area and is described below.

4.6.3 Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened pursuant to the federal ESA. Vernal pool fairy shrimp may occur in seasonal ponds, vernal pools, and swales during the wet season, which generally occurs from December through May. This species can be found in a variety of pool sizes, ranging from less than 0.001 acre to more than 24.5 acres (Eriksen and Belk 1999). The shrimp hatch from cysts when colder water (10°C [50°F] or less) fills the pool and mature in as few as 18 days, under optimal conditions (Eriksen and Belk 1999). At maturity, mating takes place and cysts are dropped. Vernal pool fairy shrimp occur in disjunct patches dispersed across California's Central Valley from Shasta County to Tulare County, the central and southern Coast Ranges from northern Solano County to Ventura County, and three areas in Riverside County (USFWS 2003).

There are nine CNDDB occurrences of vernal pool fairy shrimp within 5 miles of the Study Area (CDFW 2023a). The vernal pool and seasonal wetland within the Study Area provide suitable habitat for this species. Vernal pool fairy shrimp has the potential to occur within the Study Area.

4.6.3.1 Crotch's Bumble Bee

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

The Crotch's bumble bee inhabits open grassland and scrub habitats (Williams et al. 2014). The species visits a wide variety of flowering plants, although its very short tongue makes it best suited to forage at open flowers with short corollas (Xerces Society 2018). Plant families most commonly associated with Crotch's bumble bee include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Xerces Society 2018). Plants in the genera Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia have been reported as example food plants (Williams et al. 2014). The species primarily nests underground (Williams et al. 2014). Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or other debris (Goulson 2010, Williams et al. 2014). The flight period for Crotch's bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July (Thorp et al. 1983). The flight period for workers and males is California is from late March through September with peak abundance in early July (Thorp et al. 1983). CDFW's survey considerations define the gueen flight season as February through March; the gyne flight season as September through October; and the colony active period (highest detection probability) as April through August (CDFW 2023b). Factors that have been identified as a substantial threat to the survival and reproduction of Crotch's bumble bee include loss of habitat due to human landscape modifications (agricultural intensification, livestock grazing, urban development), increased use of herbicides and pesticides, competition, climate change, genetic factors, and disease and pathogen spillover (Hatfield et al. 2018).

No documented CNDDB occurrences of Crotch's bumble bee have been reported within 5 miles of the Study Area (CDFW 2023a). The open annual grassland within the Study Area provides suitable nesting and foraging habitat for this species. Crotch's bumble bee has potential to occur within the Study Area.

4.6.4 Vernal Pool Tadpole Shrimp

The vernal pool tadpole shrimp (*Lepidurus packardi*) is listed as endangered pursuant to the federal ESA. This species inhabits vernal pools containing clear to highly turbid water, ranging in size from 0.001 to 89.0 acres (USFWS 1994). Vernal pool tadpole shrimp are distinguished from other vernal pool branchiopods discussed in this report by a large, shield-like carapace that covers the anterior half of their body (USFWS 2003). Cysts hatch during the wet season and the shrimp reach maturity in a few weeks. This species matures slowly and is long-lived, relative to other species. Vernal pool tadpole shrimp will

continue to grow as long as the pools in which they occur remain inundated, and in some instances can survive for 6 months or longer (USFWS 2003). The geographic range of vernal pool tadpole shrimp extends from Shasta County to northern Tulare County in California's Central Valley, and in the central coast range from Solano County to Alameda County (USFWS 2003).

There are three CNDDB occurrences of vernal pool tadpole shrimp within 5 miles of the Study Area (CDFW 2023a). The vernal pool and seasonal wetland within the Study Area provide suitable habitat for this species. Vernal pool tadpole shrimp has the potential to occur within the Study Area.

4.6.5 Amphibians

A total of three special-status amphibian species were identified as having the potential to occur within the vicinity of the Study Area based on the literature review and database inquiries (Table 3). Two of the three amphibian special-status species were determined to be absent from the Study Area due to a lack of suitable habitat within the Study Area. No further discussion of the species considered to be absent from the Study Area is provided in this assessment. One of the amphibian special-status species has the potential to occur within the Study Area and is described below.

4.6.5.1 Western Spadefoot

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

There is one CNDDB occurrence of western spadefoot within 5 miles of the Study Area (CDFW 2023a). The vernal pool, seasonal wetland, seasonal wetland swales, intermittent creek and surrounding annual grassland provide suitable breeding and upland habitat for this species. Western spadefoot has the potential to occur within the Study Area.

4.6.6 Reptiles

A total of three special-status reptile species were identified as having the potential to occur in the vicinity of the Study Area based on the database inquiries and literature review (Table 3). Two species were determined to be absent from the Study Area due to the lack of suitable habitat for the species. No further discussion of these species is provided in this assessment. A brief discussion of the one remaining species with potential to occur within the Study Area is provided below.

4.6.6.1 Blainville's Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is considered a CDFW SSC. This species is easily identifiable from many other lizards in California. Like all horned lizards, it is flattened dorsoventrally and possesses enlarged scales along the back of the head that resemble horns. This species can be distinguished from the desert horned lizard, a species with which it shares only a narrow portion of its range, by a double row of pointed fringe scales. This diurnal species can occur within a variety of habitats including scrubland, annual grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral (Stebbins 2003). In the Central Valley, the species ranges from southern Tehama County southward. In the Sierra Nevada it occurs from Butte County south to Tulare County, and in the Coast Ranges it occurs from Sonoma County south into Baja California (California Department of Fish and Game [CDFG] 1988). It occurs from sea level to 8,000 feet MSL (Stebbins 2003).

There is one CNDDB occurrence of Blainville's horned lizard within 5 miles of the Study Area (CDFW 2023a). The annual grassland within the Study Area provides marginally suitable habitat for this species and the Study Area is below the typical elevational range for the species where it occurs north of Sacramento in the Sierra Nevada Mountain range. Blainville's horned lizard has a low potential to occur within the Study Area.

4.6.7 Birds

A total of 26 special-status bird species were identified as having the potential to occur within the vicinity of the Study Area based on the database inquiries and literature review (Table 3). Sixteen species were determined to be absent from the Study Area due to the lack of suitable habitat for the species. No further discussion of these species is provided in this assessment. Brief discussions of the 10 remaining species with potential to occur within the Study Area are provided below.

4.6.7.1 Osprey

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. Breeding occurs from April to September.

There is one CNDDB occurrence of osprey within 5 miles of the Study Area (CDFW 2023a). The large trees within the Study Area provide marginally suitable nesting habitat for this species. Osprey has low potential to occur within the Study Area.

4.6.7.2 Swainson's Hawk

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

Swainson's hawks nest in tall trees in a variety of wooded communities including riparian, oak woodland, roadside landscape corridors, urban areas, and agricultural areas, among others. Foraging habitat includes open grassland, savannah, low-cover row crop fields, and livestock pastures. In the Central Valley, Swainson's hawks typically feed on a combination of California vole (*Microtus californicus*), California ground squirrel (*Otospermophilus beecheyi*), ring-necked pheasant (*Phasianus colchicus*), many passerine birds, and grasshoppers (*Melanoplus* sp.). Swainson's hawks are opportunistic foragers and will readily forage in association with agricultural mowing, harvesting, discing, and irrigating (Estep 1989). The removal of vegetative cover by such farming activities results in more readily available prey items for this species.

There are no CNDDB occurrences of Swainson's hawk within 5 miles of the Study Area (CDFW 2023a). The trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area provide suitable nesting habitat for this species. The annual grassland vegetation community within the Study Area provide suitable foraging habitat for this species. Swainson's hawk has the potential to occur within the Study Area.

4.6.7.3 Burrowing Owl

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

There is one CNDDB occurrence of burrowing owl within 5 miles of the Study Area (CDFW 2023a). The annual grassland vegetation community within the Study Area provides marginally suitable habitat for this species due to the scattered trees within the annual grassland. In addition, no California ground squirrels, their burrows, or burrow surrogates were observed during the site reconnaissance visit. Burrowing owl has low potential to occur within the Study Area.

4.6.7.4 Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is not listed pursuant to either the California or federal ESAs; but is considered a SSC by the CDFW. Loggerhead shrikes nest throughout California except the northwestern corner, montane forests, and high deserts (Small 1994). Loggerhead shrikes nest in small trees and shrubs in open country with short vegetation such as pastures, old orchards, mowed roadsides, cemeteries, golf courses, agricultural fields, riparian areas, and open woodlands (Yosef 2020). The nesting season extends from March through July.

There are no CNDDB occurrences of loggerhead shrike within 5 miles of the Study Area (CDFW 2023a). The annual grassland and Eucalyptus woodland vegetation communities provide suitable breeding habitat for this species. Loggerhead shrike has the potential to occur within the Study Area.

4.6.7.5 Yellow-Billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal ESAs but is considered a USFWS BCC. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late January to mid-February, which may take up to six to eight weeks to complete, with eggs laid from April through May and fledging from May through June (Koenig and Reynolds 2020). The young leave the nest about 30 days after hatching (Koenig and Reynolds 2020). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2020).

There are no CNDDB occurrences of yellow-billed magpie within 5 miles of the Study Area (CDFW 2023a). The trees within the Eucalyptus woodland vegetation community within the Study Area provides suitable breeding habitat for this species. Yellow-billed magpie has potential to occur within the Study Area.

4.6.7.6 Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) is not listed and protected under either the California or federal ESAs but are considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse, and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (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 within the vicinity of the Study Area (CDFW 2023a). The trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area provide suitable habitat for this species. Oak titmouse has the potential to occur within the Study Area.

4.6.7.7 Wrentit

The wrentit (*Chamaea fasciata*) is not listed in accordance with either the California or federal ESAs but is designated as a BCC by the USFWS. Wrentit are sedentary residents along the west coast of North America from the Columbia River south to Baja California (Geupel and Ballard 2020). Wrentit are found in coastal sage scrub, northern coastal scrub, and coastal hard and montane chaparral, and breed in the dense understory of valley oak riparian, Douglas fir and redwood forests, early successional forests, riparian scrub, coyote bush, blackberry thickets, suburban parks, and larger gardens (Geupel and Ballard 2020). Nesting occurs from March through August.

There are no CNDDB occurrences of wrentit within 5 miles of the Study Area (CDFW 2023a). The shrubs within the Eucalyptus woodland vegetation community within the Study Area provides suitable breeding habitat for this species. Wrentit has the potential to occur within the Study Area.

4.6.7.8 Lawrence's Goldfinch

Lawrence's goldfinch (*Spinus lawrencei*) is not listed pursuant to either the California or federal ESAs but is currently a BCC according to the USFWS. Lawrence's goldfinches breed west of the Sierra Nevada-Cascade axis from Tehama, Shasta, and Trinity counties south into the foothills surrounding the Central Valley to Kern County; and on the Coast Range from Contra Costa County to Santa Barbara County (Watt et al. 2020). Lawrence's goldfinches nest in arid woodlands usually with brushy areas, tall annual weeds, and a local water source (Watt et al. 2020). Nesting occurs during March through September.

There are no CNDDB occurrences of Lawrence's goldfinch within 5 miles of the Study Area (CDFW 2023a). The Eucalyptus woodland vegetation community within the Study Area provides suitable breeding habitat for this species. Lawrence's goldfinch has the potential to occur within the Study Area.

4.6.7.9 Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) was granted emergency listing for protection under the California ESA in December 2014 but the listing status was not renewed in June 2015. After an extensive status review, the California Fish and Game Commission listed tricolored blackbirds as a threatened species in 2018. In addition, it is currently considered a USFWS BCC and a CDFW SSC. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California (Beedy et al. 2020). Tricolored blackbirds nest in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. Tricolored blackbirds nesting habitat includes emergent marsh, riparian woodland/scrub, blackberry thickets, densely vegetated agricultural and idle fields (e.g., wheat, triticale, safflower, fava bean fields, thistle, mustard, cane, and fiddleneck), usually with some nearby standing water or ground saturation (Beedy et al. 2020). They feed mainly on grasshoppers during the breeding season, but may also forage upon a variety of other insects, grains, and seeds in open grasslands, wetlands, feedlots, dairies, and agricultural fields (Beedy et al. 2020). The nesting season is generally from March through August.

There is one CNDDB occurrence of tricolored blackbird within 5 miles of the Study Area (CDFW 2023a). The blackberry shrubs adjacent to the intermittent creek within the Eucalyptus woodland vegetation community within the Study Area provide suitable breeding habitat for this species. Tricolored blackbird has the potential to occur within the Study Area.

4.6.7.10 Bullock's Oriole

Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal ESAs but is currently a BCC according to the USFWS. In California, Bullock's orioles are found throughout the state except the higher elevations of mountain ranges and the eastern deserts (Small 1994). They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees (Flood et al. 2020). Nesting occurs from March through July.

There are no CNDDB occurrences of Bullock's oriole within 5 miles of the Study Area (CDFW 2023a). The trees within the Eucalyptus woodland vegetation community within the Study Area provide suitable breeding habitat for this species. Bullock's oriole has the potential to occur within the Study Area.

4.6.7.11 Other Protected Birds

All native or naturally occurring birds and their occupied nests/eggs are protected under the federal MBTA and California Fish and Game Code. The Study Area supports suitable nesting habitat for a variety of common birds protected under these regulations.

4.6.8 Mammals

A total of five special-status mammal species were identified as having potential to occur in the vicinity of the Study Area based on the database inquiries and literature review (Table 3). Two species were determined to be absent from the Study Area due to the lack of suitable habitat for the species. No further discussion of these species is provided in this assessment. Brief discussions of the three remaining mammal special species with potential to occur within the Study Area are provided below.

4.6.8.1 Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the federal or California ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and higher elevation coniferous forest (Philpott 1996; Western Bat Working Group [WBWG] 2021). This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges, and barns. Pallid bats are feeding generalists that glean a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, they often use only

passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2021).

There are no CNDDB occurrences of pallid bat within the vicinity of the Study Area (CDFW 2023a). Mature trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area may provide suitable day roosting habitat for this species. Pallid bat has the potential to occur within the Study Area.

4.6.8.2 Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. Townsend's big-eared bat is a fairly large bat with prominent bilateral noes lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. This species has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet amsl. Habitats used include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. Townsend's bigeared bat is a moth specialist with more than 90 percent of its diet composed of lepidopterans. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (WBWG 2021).

There is one CNDDB occurrence of Townsend's big-eared bat within 5 miles of the Study Area (CDFW 2023a). Mature trees within the annual grassland and Eucalyptus woodland vegetation communities within the Study Area may provide suitable day-roosting habitat for this species. Townsend's big-eared bat has the potential to occur within the Study Area.

4.6.8.3 Western Red Bat

The western red bat (*Lasiurus frantzii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered a SSC by CDFW. The western red bat is easily distinguished from other western bat species by its distinctive red coloration. This species is broadly distributed, its range extending from southern British Columbia in Canada through Argentina and Chile in South America and including much of the western U.S. This solitary species day roosts primarily in the foliage of trees or shrubs in edge habitats bordering streams or open fields, in orchards, and occasionally urban areas. They may be associated with intact riparian habitat, especially with willows, cottonwoods, and sycamores. This species may occasionally utilize caves for roosting as well. They feed on a variety of insects, and generally begin to forage 1 to 2 hours after sunset. This species is considered highly migratory; however, the timing of migration and the summer ranges of males and females may be different. Winter behavior of this species is poorly understood (WBWG 2023).

There are no CNDDB occurrences of western red bat within 5 miles of the Study Area (CDFW 2023a). Trees and shrubs within the Eucalyptus woodland vegetation community within the Study Area may provide suitable day roosting habitat for this species. Western red bat has the potential to occur within the Study Area.

4.7 Critical Habitat and Essential Fish Habitat

There is no Critical Habitat mapped within the Study Area for any federally listed species.

4.8 Riparian Habitats and Sensitive Natural Communities

Five sensitive natural communities were identified as having potential to occur within the Study Area based on the literature review and database inquiries (CDFW 2023c). These include Northern Hardpan Vernal Pool, Northern Basalt Flow Vernal Pool, Northern Volcanic Mud Flow Vernal Pool, Great Valley Cottonwood Riparian Forest, and Great Valley Willow Scrub. The aquatic features within the Study Area may be considered a sensitive natural community by CDFW; however, impacts to aquatic features are typically mitigated for during the CWA Section 401/404, RWQCB Waste Discharge Requirements, and/or the CDFW 1602 SAA permitting process. Therefore, no recommendations are provided for mitigation of impacts to sensitive natural communities for the Project.

4.9 Wildlife Movement/Migration Corridors

The Study Area is located within the City of Oroville and is surrounded by development on all sides; therefore, the Study Area does not have habitat connectivity and does not represent wildlife movement or migration corridors.

There are no California Essential Habitat Connectivity areas within the Study Area (CDFW 2023a).

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. This data is available through CDFW's Biogeographic Information and Observation System database or as occurrence records in the CNDDB and is supplemented with the results of the field reconnaissance. No nursery sites have been documented within the Study Area (CDFW 2023a) and none were observed during the site reconnaissance.

5.0 RECOMMENDATIONS

This section summarizes recommended measures to avoid potential impacts to biological resources from the Proposed Project.

5.1 Water of the U.S./State

The Study Area supports potentially USACE jurisdictional and/or RWQCB jurisdictional aquatic features (Figure 4). If the Project proposes impacts to potentially jurisdictional USACE or RWQCB aquatic features, then the following measures are recommended to avoid or minimize impacts to Waters of the U.S./State:

- Obtain an approved jurisdictional determination from the USACE and/or Waters of the State from the Central Valley RWQCB to determine the jurisdiction of the aquatic features within the Study Area.
- A permit authorization under Section 404 of the federal CWA (Section 404 Permit) must be obtained from USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Final Avoidance and Minimization Measures would be developed as part of the Section 404 Permit process to ensure no-net-loss of wetland function and values.
- A permit authorization from the Central Valley RWQCB pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Act must be obtained prior to the discharge of material in an area that could affect Waters of the U.S./State. Mitigation requirements for discharge to Waters of the U.S./State would be developed in consultation with the Central Valley RWQCB.
- A SAA from CDFW pursuant to Section 1602 of the California Fish and Game Code must be obtained for impacts to features (e.g., the bed, channel, or bank of any river, stream, or lake) that may be subject to Section 1600 of the Fish and Game Code. The construction contractor shall adhere to all conditions outlined in the Section 1602 SAA.

5.2 Riparian Habitats and Sensitive Natural Communities

The Eucalyptus woodland vegetation community area found within the Study Area may be considered a sensitive natural community by CDFW. If the Project requires the removal of riparian vegetation, the following measures are recommended to minimize impacts to riparian habitat:

A SAA, pursuant to Section 1602 of the California Fish and Game Code, must be obtained for any activity that will impact the intermittent creek and associated riparian habitat. Minimization and mitigation measures would be developed during consultation with CDFW as part of the SAA process to ensure protections for affected fish and wildlife resources are implemented.

5.3 Wildlife Movement and Migration Corridors

The Study Area does not have habitat connectivity and does not represent wildlife movement or migration corridors; therefore, no recommendations are provided.

5.4 Special-Status Plants

There is potential for 10 special-status plant species to occur within the Study Area. The following measures are recommended to minimize potential impacts to special-status plants:

Perform focused plant surveys of the Project site according to CDFW, CNPS, and USFWS protocols prior to construction (CDFG 2009; CNPS 2001; USFWS 1996). Surveys shall be conducted by a qualified biologist according to the blooming period for target species and timed according to the appropriate phenological stage for identifying target species. Known reference populations will be visited and/or local herbaria records should 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.

If special-status plants are identified within 25-feet of the Project Site, implement the following measures:

The Project will avoid occurrences of special-status plant species by establishing and clearly demarcating avoidance zones around the plant occurrences prior to construction. Avoidance zones should include the extent of the special-status plants plus a minimum 25-foot buffer, unless otherwise determined by a qualified biologist, and should be maintained until the completion of construction. Additional measures such as seed collection and/or transplantation may be developed in consultation with CDFW and the CEQA lead agency if special-status plant species are found within the Project Site and avoidance of the species is not possible.

5.5 Special-Status Invertebrates

There is potential for three special-status invertebrate species to occur within the Study Area. The following measures are recommended to avoid and minimize potential impacts to special-status invertebrate species:

5.5.1 Federally Listed Branchiopods

Both vernal pool fairy shrimp and vernal pool tadpole shrimp have the potential to occur within the vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area. If the Project proposes avoidance of impacts to the vernal pool, seasonal wetland, and seasonal wetland swales within the Study Area, then no measures regarding impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp are required.

If the Project proposes impacts to any of the wetland features within the Study Area, then the following measures are recommended to minimize potential impacts to federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp:

- Conduct USFWS protocol-level dry and wet season surveys to determine presence or absence of vernal pool fairy shrimp and vernal pool tadpole shrimp, or if surveys are not conducted, presence should be assumed for both species within suitable habitat. If no federally listed shrimp are found during protocol-level surveys, results are accepted by the CEQA lead agency, and surveys are considered recent at the time of Project construction, no further measures pertaining to federally listed branchiopods are recommended. Repeat surveys may be required if prior surveys are not considered recent or not accepted by the CEQA lead agency at the time of construction.
- If presence of federally listed branchiopod is determined or presumed, obtain take coverage from USFWS under Section 7 or Section 10 of the federal ESA and preserve federally listed branchiopod habitat (e.g., vernal pools) onsite and/or at an offsite mitigation property at a minimum ratio of 1:1 and as agreed upon through consultation with USFWS. Comply with all avoidance and/or minimization measures of the USFWS BO or HCP. Measures may include implementation of Best

Management Practices and erosion control measures to prevent direct and indirect effects to avoided federally listed branchiopod habitat.

5.5.2 Crotch's Bumble Bee

Crotch's bumble bee has the potential to occur within the annual grassland vegetation community of the Study Area. Implementation of the following recommended measures would minimize impacts to Crotch's bumble bee:

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

period (February through March), colony active period (March through September), and/or gyne flight period (September through October). Because bumble bees move nest sites each year, two preconstruction nesting surveys shall be required during each subsequent year of construction, regardless of the previous year's findings, whenever vegetation and ground-disturbing activities are scheduled to occur during the flight season if nesting and foraging habitat is still present or has re-established.

5.6 Special-Status Amphibians

There is potential for one special-status amphibian species to occur within the Study Area. The following measures are recommended to minimize potential impacts to special-status amphibian species:

5.6.1 Western Spadefoot

Western spadefoot has the potential to occur within the vernal pool, seasonal swale, seasonal wetlands, and the surrounding upland habitat within the annual grassland within the Study Area. Implementation of the following recommended measures would minimize impacts to western spadefoot:

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

- Wildlife exclusion fencing will be installed around aquatic features that represent western spadefoot breeding habitat and shall be checked daily by a qualified biologist to relocate encountered individuals and ensure the fencing is intact and functioning properly. Wildlife exclusion fencing installed around aquatic features with positive detections of western spadefoot will be installed 40 meters from the extent of the aquatic feature. Project personnel will allow any encountered individuals to leave the site on their own volition or will be relocated by a qualified biologist to suitable breeding habitat.
- Prior to installation of wildlife exclusion fencing, a qualified biologist will conduct a clearance survey of the aquatic features and associated upland habitat. Wildlife exclusion fencing shall be installed under supervision and direction of a qualified biologist to avoid small mammal burrow refugia to the greatest extent possible.
- Any erosion or sediment control devices (such as straw wattles or erosion blankets)
 implemented within 500 feet of aquatic features that represent western spadefoot breeding
 habitat shall not contain materials that could cause entanglement of western spadefoot such
 as monofilament or any other nonbiodegradable material.

5.7 Special-Status Reptiles

There is potential for one special-status reptile species to occur within the Study Area. The following measures are recommended to minimize potential impacts to special-status reptile species:

5.7.1 Blainville's Horned Lizard

Blainville's horned lizard has a low potential to occur within the Study Area. Implementation of the following recommended measure would minimize potential impacts to Blainville's horned lizard:

Conduct a preconstruction survey for Blainville's horned lizard within the Study Area 48 hours prior to construction activities. Any Blainville's horned lizard individuals discovered in the Project work area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified wildlife biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.

5.8 Special-Status Birds and Migratory Bird Treaty Act-Protected Birds (Including Nesting Raptors)

The Study Area supports potential nesting habitat for 12 special-status bird species in addition to raptors and other common species of birds protected under MBTA and the California Fish and Game Code. The following measures are recommended to minimize potential impacts to nesting special-status birds, and common species of nesting raptors and birds:

5.8.1 Swainson's Hawk

Swainson's hawk has the potential to occur within and immediately adjacent to the Study Area. In order to avoid potential impacts to Swainson's hawk, the following avoidance and minimization measures are recommended:

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

5.8.2 Burrowing Owl

Burrowing owl has a low potential to occur in the annual grassland vegetation community within the Study Area. In order to avoid potential impacts to burrowing owl, the following avoidance and minimization measure is recommended:

A preconstruction survey for nesting burrowing owl will be conducted by a qualified biologist within 14 days prior to commencement of Project activities within the Study Area and a 250-foot buffer. Surveys shall be conducted at appropriate times and in appropriate weather conditions to maximize detection. If active burrowing owl burrows are found, an avoidance buffer will be immediately established, and an avoidance plan will be prepared in consultation with CDFW prior to the commencement of any ground-disturbing activities.

5.8.3 Tricolored Blackbird

Tricolored blackbird has the potential to occur in the annual grassland and Eucalyptus woodland vegetation communities within the Study Area. In order to avoid potential impacts to tricolored blackbird, the following avoidance and minimization measures are recommended:

Prior to initiation of construction activities in all Project work areas and within 1,300 feet of Project work areas, a qualified biologist shall conduct preconstruction surveys to evaluate the presence of

tricolored blackbird nesting colonies. In instances where an adjacent parcel is not accessible to survey because the qualified biologist was not granted permission to enter, the qualified biologist will scan all potential nest colony sites from the adjacent property, roadsides, or other safe, publicly accessible viewpoints, without trespassing, using binoculars and/or a spotting scope to look for tricolored blackbird nesting activity.

Surveys should be conducted at least twice with at least one month between surveys during the nesting season one year prior to initial ground disturbing activities if feasible, and the year of ground-disturbing activities (required). If ground-disturbing activities will occur in the Project work area during the nesting season, three surveys shall be conducted within 15 days prior to ground-disturbing activities, with one of the surveys occurring within five days prior to the start of ground-disturbing activities. The survey methods will be based on Kelsey (2008) or a similar protocol approved by CDFW based on site-specific conditions.

5.8.4 Nesting Birds and Raptors

Osprey, loggerhead shrike, yellow-billed magpie, oak titmouse, Lawrence's goldfinch, Bullock's oriole, and other MBTA-protected birds, including raptors, have the potential to nest within the Study Area. The following measure is recommended to minimize potential impacts to nesting birds and raptors:

If Project activities are to occur during the nesting season (generally February 1 through August 31), conduct a preconstruction nesting bird survey of all suitable nesting habitat within 14 days of the commencement of Project activities. The survey shall be conducted within a 500-foot radius of Project work areas for raptors and within a 100-foot radius for other nesting birds. If any active nests are observed, these nests shall be designated a sensitive area and protected by an avoidance buffer implemented by the contractor and under the supervision of a qualified biologist until the breeding season has ended or until a qualified biologist has determined that the young have fledged and are no longer reliant upon the nest or parental care for survival. A Preconstruction Nesting Bird Survey Report will be prepared by a qualified biologist that includes surveyors' names and affiliation, dates and times of surveys, methods, results, and recommendations. If there is a lapse in Project activities of 14 days or longer, then additional nesting bird survey(s) will be conducted. Preconstruction nesting surveys are not required for construction activity outside the nesting season.

5.9 Special-Status and Day-Roosting Bats

5.9.1 Pallid Bat, Townsend's Big-Eared Bat, and Day Roosting Bats

Pallid bat, Townsend's big-eared bat, and other species of day-roosting bats have the potential to occur within suitable day-roosting habitat in mature trees within the Study Area. In order to avoid potential impacts to pallid bat, Townsend's big-eared bat, and other species of day-roosting bats the following avoidance and minimization measures are recommended:

If trees are scheduled to be removed or trimmed, then a qualified bat biologist will conduct a bat habitat assessment for suitable bat roosting habitat prior to any construction activities. The

habitat assessment should be conducted one year prior to the initiation of construction activities, if feasible, and no less than 30 days prior to the initiation of construction activities. If no suitable roosting habitat is identified, no further measures are necessary. If suitable roosting habitat and/or signs of bat use are identified during the assessment, the roosting habitat should be avoided to the extent possible.

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

methods for passive bat exclusion, for written acceptance prior to implementation and tree disturbance.

■ If bat roost mitigation is required, roost mitigation will be installed as far in advance of the bat maternity season as possible, but no less than 30 days prior to roost removal.

5.9.2 Western Red Bat

Western red bat has the potential to occur in shrub and tree foliage within the Study Area. In order to avoid potential impacts to western red bat, the following avoidance and minimization measures are recommended:

If shrubs or trees are proposed to be removed or trimmed and determined by a qualified bat biologist to be suitable day-roosting habitat for western red bat, then a qualified bat biologist will prepare a Bat Management Plan that will include specific avoidance and minimization measures to reduce impacts to roosting western red bats. The Bat Management Plan will be submitted to CDFW for approval prior to the removal of trees and shrubs. The Project-specific Bat Management Plan shall include the requirement for preconstruction acoustic surveys for western red bats, a requirement for a preconstruction survey report including methods, results, and recommendations based on the acoustic survey submitted to CDFW, roost removal timing outside of the maternity and hibernation seasons and methodology; and will include as necessary and appropriate the inclusion of no-disturbance buffers, methods and materials for bat deterrents, and/or species-specific habitat replacement mitigation.

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LIST OF APPENDICES

Appendix A – Results of Database Queries

Appendix B – Representative Site Photographs

Appendix C – List of Plant Species Observed within the Study Area

Appendix D – List of Wildlife Species Observed within the Study Area

APPENDIX A

Results of Database Searches



California Department of Fish and Wildlife



California Natural Diversity Database

Query Criteria:

Quad IS (Oroville (3912155) OR Oroville Dam (3912154) OR Shippee (3912156) OR Shippee (3912156) OR Berry Creek (3912164) OR Cherokee (3912165) OR Palermo (3912145) OR Bangor (3912144) OR Biggs (3912146))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAABF02020	Spea hammondii	None	None	G2G3	S3S4	SSC
AAABF02020	western spadefoot	None	None	G2G3	3334	330
AAABH01022	Rana draytonii	Threatened	None	G2G3	S2S3	SSC
AAABI 10 1022	California red-legged frog	riileaterieu	None	G2G3	3233	330
AAABH01052	Rana boylii pop. 2	Threatened	Threatened	G3T2	S2	
AAABI 10 1032	foothill yellow-legged frog - Feather River DPS	riileaterieu	Tilleaterieu	G312	32	
ABNGA04010	Ardea herodias	None	None	G5	S4	
ADIVOAGTO	great blue heron	None	None	00	04	
ABNKC01010	Pandion haliaetus	None	None	G5	S4	WL
ADIVICOTOTO	osprey	None	None	00	04	***
ABNKC10010	Haliaeetus leucocephalus	Delisted	Endangered	G5	S3	FP
ABINIO 10010	bald eagle	Delisted	Litarigerea	00	00	• •
ABNKC11011	Circus hudsonius	None	None	G5	S3	SSC
ABIAROTTOTT	northern harrier	None	None	00	00	000
ABNKC19070	Buteo swainsoni	None	Threatened	G5	S4	
7.514.10 10070	Swainson's hawk	110110	rinoatorioa	00	0.	
ABNKD06071	Falco peregrinus anatum	Delisted	Delisted	G4T4	S3S4	
	American peregrine falcon					
ABNME03041	Laterallus jamaicensis coturniculus	None	Threatened	G3T1	S2	FP
	California black rail					
ABNMK01014	Antigone canadensis tabida	None	Threatened	G5T5	S2	FP
	greater sandhill crane					
ABNSB10010	Athene cunicularia	None	None	G4	S2	SSC
	burrowing owl					
ABPAU08010	Riparia riparia	None	Threatened	G5	S3	
	bank swallow					
ABPBR01030	Lanius Iudovicianus	None	None	G4	S4	SSC
	loggerhead shrike					
ABPBW01114	Vireo bellii pusillus	Endangered	Endangered	G5T2	S3	
	least Bell's vireo					
ABPBX03010	Setophaga petechia	None	None	G5	S3	SSC
	yellow warbler					
ABPBXB0020	Agelaius tricolor	None	Threatened	G1G2	S2	SSC
	tricolored blackbird					
AFCAA01031	Acipenser medirostris pop. 1	Threatened	None	G2T1	S1	
	green sturgeon - southern DPS					
AFCHA0205L	Oncorhynchus tshawytscha pop. 11	Threatened	Threatened	G5T2Q	S2	
	chinook salmon - Central Valley spring-run ESU					



California Department of Fish and Wildlife California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AFCHA0209K	Oncorhynchus mykiss irideus pop. 11	Threatened	None	G5T2Q	S2	000 0111
00_00	steelhead - Central Valley DPS	σαισσα		30.24	<u></u>	
AMACC01090	Myotis thysanodes	None	None	G4	S3	
	fringed myotis					
AMACC02010	Lasionycteris noctivagans	None	None	G3G4	S3S4	
	silver-haired bat					
AMACC08010	Corynorhinus townsendii	None	None	G4	S2	SSC
	Townsend's big-eared bat					
AMACC10010	Antrozous pallidus	None	None	G4	S3	SSC
	pallid bat					
AMACD02011	Eumops perotis californicus	None	None	G4G5T4	S3S4	SSC
	western mastiff bat					
AMAFJ01010	Erethizon dorsatum	None	None	G5	S3	
	North American porcupine					
ARAAD02030	Emys marmorata	Proposed	None	G3G4	S3	SSC
	western pond turtle	Threatened				
ARACF12100	Phrynosoma blainvillii	None	None	G4	S4	SSC
	coast horned lizard					
ARADB36150	Thamnophis gigas	Threatened	Threatened	G2	S2	
	giant gartersnake					
CTT44110CA	Northern Hardpan Vernal Pool	None	None	G3	S3.1	
	Northern Hardpan Vernal Pool					
CTT44131CA	Northern Basalt Flow Vernal Pool	None	None	G3	S2.2	
	Northern Basalt Flow Vernal Pool					
CTT44132CA	Northern Volcanic Mud Flow Vernal Pool	None	None	G1	S1.1	
CTTC4.44.0CA	Northern Volcanic Mud Flow Vernal Pool	Nana	Nama	00	00.4	
CTT61410CA	Great Valley Cottonwood Riparian Forest Great Valley Cottonwood Riparian Forest	None	None	G2	S2.1	
CTT63410CA	Great Valley Willow Scrub	None	None	G3	S3.2	
C1105410CA	Great Valley Willow Scrub	None	None	03	00.2	
ICBRA03030	Branchinecta lynchi	Threatened	None	G3	S 3	
10211/100000	vernal pool fairy shrimp	modicined	None	G 0	00	
ICBRA06010	Linderiella occidentalis	None	None	G2G3	S2S3	
.02000.0	California linderiella			0200	0200	
ICBRA10010	Lepidurus packardi	Endangered	None	G3	S3	
	vernal pool tadpole shrimp	gg				
IICOL48011	Desmocerus californicus dimorphus	Threatened	None	G3T3	S3	
	valley elderberry longhorn beetle					
IIHYM24252	Bombus occidentalis	None	Candidate	G3	S1	
	western bumble bee		Endangered			
IIHYM24260	Bombus pensylvanicus	None	None	G3G4	S2	
	American bumble bee					



California Department of Fish and Wildlife California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
IIHYM24480	Bombus crotchii	None	Candidate	G2	S2	
	Crotch bumble bee		Endangered			
IMBIV19010	Gonidea angulata	None	None	G3	S2	
	western ridged mussel					
PDAST11061	Balsamorhiza macrolepis big-scale balsamroot	None	None	G2	S2	1B.2
PDAST5N0F0	Layia septentrionalis	None	None	G2	S2	1B.2
I DAGISINGI O	Colusa layia	None	NOTIC	OZ.	02	10.2
PDAST8H182	Packera eurycephala var. lewisrosei	None	None	G4T2	S2	1B.2
. 27.0.002	Lewis Rose's ragwort			02	<u></u>	
PDBRA0K1B1	Cardamine pachystigma var. dissectifolia	None	None	G3G5T2Q	S2	1B.2
	dissected-leaved toothwort					
PDCAR0L0V0	Paronychia ahartii	None	None	G3	S3	1B.1
	Ahart's paronychia					
PDCAR0X0U0	Stellaria obtusa	None	None	G5	S4	4.3
	obtuse starwort					
PDEUP0D150	Euphorbia hooveri	Threatened	None	G1	S1	1B.2
	Hoover's spurge					
PDFAB40310	Trifolium jokerstii	None	None	G2	S2	1B.2
	Butte County golden clover					
PDLAM18082	Monardella venosa veiny monardella	None	None	G1	S1	1B.1
PDLIM02042	Limnanthes floccosa ssp. californica	Endangered	Endangered	G4T1	S1	1B.1
	Butte County meadowfoam	3.0	3			
PDMAL0H0R3	Hibiscus lasiocarpos var. occidentalis	None	None	G5T3	S3	1B.2
	woolly rose-mallow					
PDMAL110P0	Sidalcea robusta	None	None	G2	S2	1B.2
	Butte County checkerbloom					
PDONA05053	Clarkia biloba ssp. brandegeeae	None	None	G4G5T4	S4	4.2
	Brandegee's clarkia					
PDONA050J1	Clarkia gracilis ssp. albicaulis	None	None	G5T3	S3	1B.2
	white-stemmed clarkia					
PDONA050Q2	Clarkia mildrediae ssp. mildrediae Mildred's clarkia	None	None	G3T3?	S3?	1B.3
PDONA050S0	Clarkia mosquinii	None	None	G2	S2	1B.1
I DOIVA00000	Mosquin's clarkia	None	None	02	02	10.1
PDPGN086UY	Eriogonum umbellatum var. ahartii	None	None	G5T3	S 3	1B.2
	Ahart's buckwheat		- -	-		_
PDPHR01150	Erythranthe filicifolia	None	None	G2	S2	1B.2
	fern-leaved monkeyflower					
PDRAN0B1J0	Delphinium recurvatum	None	None	G2?	S2?	1B.2
	recurved larkspur					



California Department of Fish and Wildlife California Natural Diversity Database



Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDSCR0D482	Castilleja rubicundula var. rubicundula	None	None	G5T2	S2	1B.2
	pink creamsacs			_		
PMALI040Q0	Sagittaria sanfordii Sanford's arrowhead	None	None	G3	S3	1B.2
PMJUN011L1	Juncus leiospermus var. ahartii Ahart's dwarf rush	None	None	G2T1	S1	1B.2
PMJUN011L2	Juncus leiospermus var. leiospermus Red Bluff dwarf rush	None	None	G2T2	S2	1B.1
PMLIL022V0	Allium jepsonii Jepson's onion	None	None	G2	S2	1B.2
PMLIL0V060	Fritillaria eastwoodiae Butte County fritillary	None	None	G3Q	S3	3.2
PMLIL0V0F0	Fritillaria pluriflora adobe-lily	None	None	G2G3	S2S3	1B.2
PMPOA040K0	Agrostis hendersonii Henderson's bent grass	None	None	G2Q	S2	3.2
PMPOA4G050	Orcuttia tenuis slender Orcutt grass	Threatened	Endangered	G2	S2	1B.1
PMPOA4Z310	Poa sierrae Sierra blue grass	None	None	G3	S3	1B.3
PMPOA6N010	Tuctoria greenei Greene's tuctoria	Endangered	Rare	G1	S1	1B.1

Record Count: 72



CNPS Rare Plant Inventory

Search Results

63 matches found. Click on scientific name for details

Search Criteria: <u>9-Quad</u> include [**3912154**:**3912155**:**3912166**:**3912156**:**3912165**:**3912165**:**3912145**:**3912145**

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK		CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	РНОТС
<u>Agrostis</u> hendersonii	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	None	None	G2Q	S2	3.2		1974- 01-01	©2009 Steve
<u>Allium jepsonii</u>	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	1994- 01-01	© 2019 Steven
Allium sanbornii var. sanbornii	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	None	None	G4T4?	S3S4	4.2		1994- 01-01	©201a Stever
Arctostaphylos mewukka ssp. ruei		Ericaceae	perennial evergreen shrub	Feb-Jul	None	None	G4?T3	S3	4.2	Yes	1984- 01-01	© 200 Georg W.
Astragalus pauperculus	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G4	S4	4.3	Yes	1974- 01-01	©201 Tim Kelliso
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual/perennial herb	Aug	None	None	G5	S4	4.2		1994- 01-01	No Pho
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	1974- 01-01	©199 Dean Wm. Taylor

Brodiaea rosea ssp. vallicola	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr- May(Jun)	None	None	G5T3	\$3	4.2	Yes	2019- 01-07	© 2011 Steven Perry
	Sierra foothills brodiaea	Themidaceae	perennial bulbiferous herb	May-Aug	None	None	G3	S3	4.3	Yes	2012- 11-20	© 2006 George W. Hartwell
<u>Bryum</u> <u>chryseum</u>	brassy bryum	Bryaceae	moss		None	None	G5	S3	4.3		2014- 05-05	No Photo Available
	thread-leaved beakseed	Cyperaceae	annual herb	Jun-Aug	None	None	G5	S3	4.2		2001- 01-01	©2016 Ryan Batten
	Butte County calycadenia	Asteraceae	annual herb	Apr-Jul	None	None	G3	S3	4.2	Yes	1974- 01-01	No Photo Available
<u>pachystigma</u>	dissected- leaved toothwort	Brassicaceae	perennial rhizomatous herb	Feb-May	None	None	G3G5T2Q	S2	1B.2	Yes	1988- 01-01	No Photo Available
	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	None	None	G5T2	S2	1B.2	Yes	2001- 01-01	©2010 Vernon Smith
	Brandegee's clarkia	Onagraceae	annual herb	(Mar)May- Jul	None	None	G4G5T4	S4	4.2	Yes	2001- 01-01	No Photo Available
	white- stemmed clarkia	Onagraceae	annual herb	May-Jul	None	None	G5T3	S3	1B.2	Yes	1994- 01-01	No Photo Available
<u>mildrediae ssp.</u>	golden- anthered clarkia	Onagraceae	annual herb	Jun-Aug	None	None	G3T3	S3	4.2	Yes	2001- 01-01	No Photo Available
<u>Clarkia</u> mildrediae ssp. mildrediae	Mildred's clarkia	Onagraceae	annual herb	May-Aug	None	None	G3T3?	S3?	1B.3	Yes	1974- 01-01	No Photo Available
	Mosquin's clarkia	Onagraceae	annual herb	May- Jul(Sep)	None	None	G2	S2	1B.1	Yes	1980- 01-01	© 2002 Dean Wm Taylor

<u>Claytonia</u> <u>palustris</u>	marsh claytonia	Montiaceae	perennial herb	May-Oct	None	None G4	S4	4.3	Yes	1988- 01-01	©2006 Dean Wm. Taylor, Ph.D.
<u>Claytonia</u> parviflora ssp. grandiflora	streambank spring beauty	Montiaceae	annual herb	Feb-May	None	None G5T3	S3	4.2	Yes	2006- 09-29	No Photo
C <u>ypripedium</u> californicum	California lady's-slipper	Orchidaceae	perennial rhizomatous herb	Apr- Aug(Sep)	None	None G3	S4	4.2		1980- 01-01	© 2012 Barry Rice
<u>Cypripedium</u> f <u>asciculatum</u>	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	Mar-Aug	None	None G4	S4	4.2		1980- 01-01	© 2013 Scot Loring
<u>Delphinium</u> recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None G2?	S2?	1B.2	Yes	1988- 01-01	No Photo
Eng <u>ellaria</u> obtusa	obtuse starwort	Caryophyllaceae	perennial rhizomatous herb	May- Sep(Oct)	None	None G5	S4	4.3		1988- 01-01	©2014 Kirsten Bovee
Eriogonum umbellatum var. ahartii	Ahart's buckwheat	Polygonaceae	perennial herb	Jun-Sep	None	None G5T3	S3	1B.2	Yes	2010- 11-29	No Photo
Erythranthe filicifolia	fern-leaved monkeyflower	Phrymaceae	annual herb	Apr-Jun	None	None G2	S2	1B.2	Yes	2017- 05-10	Belinda Lo, 2020
Erythranthe glaucescens	shield-bracted monkeyflower	Phrymaceae	annual herb	Feb- Aug(Sep)	None	None G3G4	S3S4	4.3	Yes	1974- 01-01	Neal Kramer 2020
Erythranthe inconspicua	small- flowered monkeyflower	Phrymaceae	annual herb	May-Jun	None	None G4	S4	4.3	Yes	1974- 01-01	© 2017 Debra L. Cook
<u>Euphorbia</u> hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul- Sep(Oct)	FT	None G1	S1	1B.2	Yes	1974- 01-01	No Photo

Description		-	Liliaceae	-	Mar-Jun	None	None	G3Q	S3	3.2		Sierra Pacific
Publication		adobe-lily	Liliaceae		Feb-Apr	None	None	G2G3	S2S3	1B.2	Yes	Steve
caulescens starfish starfish starfish starfish Hibiscus losicacrops var. occidentalis woolly rose-losication occidentalis Malvaceae mallow perennial rhizomatous herb (emergent) occidentalis Jun-Sep Indicated was perennial indicated by a starfish None None GST3 S3 18.2 Yes 1974- occidentalis steren per nush Juncus leiospermus var. ahartis Ahart's dwarf Juncaceae annual herb Mar-May None None GZT1 S1 18.2 Yes 1984- occidentalis steren per nush Juncus leiospermus var. ahartis Red Bluff claspermus var. ahartis Juncaceae annual herb Mar-Jun None None GZT2 S2 18.1 Yes 1974- occidentalis steren per nush Logia septentrionalis Colusa layia septentrionalis Asteraceae annual herb Apr-May None None G2 S2 18.2 Yes 1994- occidentalis steren per nush Logio septentrionalis Colusa layia septentrionalis Asteraceae annual herb Apr-May None None G2 S2 18.2 Yes 1994- occidentalis steren per nush Logio septentrionalis Septentifican per nush Polemoniaceae annual herb Mar-Jun None None G2 S4 4.2 Yes 1994- occidentalis Logio septentrionalis Polemoniaceae annual	<u>pulchella ssp.</u>	-	Campanulaceae	annual herb	May-Jun	None	None	G4T3	S3	4.3	Yes	Barry
Resiocarpos var. oscidentalis Prinzematous Pr			Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	John
leiospermus var. ahartii rush 201-01 <	<u>lasiocarpos</u> <u>var.</u>	-	Malvaceae	rhizomatous	Jun-Sep	None	None	G5T3	S3	1B.2	Yes	Steven
Legtosiphon ambiguus Serpentine ambiguus Polemoniaceae annual herb Mar-Jun None None G4 S4 4.2 Yes 1994-01-01 2013-01-01 <td><u>leiospermus</u></td> <td></td> <td>Juncaceae</td> <td>annual herb</td> <td>Mar-May</td> <td>None</td> <td>None</td> <td>G2T1</td> <td>S1</td> <td>1B.2</td> <td>Yes</td> <td>Carol W.</td>	<u>leiospermus</u>		Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	Yes	Carol W.
septentrionalis Leptosiphon ambiguus Polemoniaceae annual herb Mar-Jun None None G4 Leptosiphon leptosiphon Aaron	<u>leiospermus</u> <u>var.</u>		Juncaceae	annual herb	Mar-Jun	None	None	G2T2	S2	1B.1	Yes	Dylan
ambiguus leptosiphon 01-01 © 2010 Aaron		Colusa layia	Asteraceae	annual herb	Apr-May	None	None	G2	S2	1B.2	Yes	Jake
			Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Yes	Aaron

	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994- 01-01	© 2007 Len Blumin
<u>Lilium</u> humboldtii ssp. humboldtii	Humboldt lily	Liliaceae	perennial bulbiferous herb	May- Jul(Aug)	None	None	G4T3	S3	4.2	Yes	1994- 01-01	© 2008 Sierra Pacific Industries
	Butte County meadowfoam	Limnanthaceae	annual herb	Mar-May	FE	CE	G4T1	S1	1B.1	Yes	1980- 01-01	© 2007 George W. Hartwell
	woolly meadowfoam	Limnanthaceae	annual herb	Mar- May(Jun)	None	None	G4T4	S3	4.2		1980- 01-01	© 2021 Scot Loring
	sylvan microseris	Asteraceae	perennial herb	Mar-Jun	None	None	G4	S4	4.2	Yes	2001- 01-01	No Photo Available
	elongate copper moss	Mielichhoferiaceae	moss		None	None	G5	S3S4	4.3		2001-	© 2012 John Game
	veiny monardella	Lamiaceae	annual herb	May-Jul	None	None	G1	S1	1B.1	Yes	1984- 01-01	© 2007 George W. Hartwell
<u>Navarretia</u> heterandra	Tehama navarretia	Polemoniaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3		1974- 01-01	©2021 Scot Loring
	slender Orcutt grass	Poaceae	annual herb	May- Sep(Oct)	FT	CE	G2	S2	1B.1	Yes	1974- 01-01	© 2013 Justy Leppert
Packera eurycephala var. lewisrosei	Lewis Rose's ragwort	Asteraceae	perennial herb	Mar- Jul(Aug- Sep)	None	None	G4T2	S2	1B.2	Yes	1984- 01-01	No Photo Available

<u>Paronychia</u> <u>ahartii</u>	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	None	None	G3	S3	1B.1	Yes	1988- 01-01	© 2004 Carol W.
<u>Perideridia</u> <u>bacigalupii</u>	Bacigalupi's yampah	Apiaceae	perennial herb	Jun-Aug	None	None	G3	S3	4.2	Yes	1974- 01-01	No Photo Available
<u>Plagiobryoides</u> <u>vinosula</u>	wine-colored tufa moss	Bryaceae	moss		None	None	G3G4	S3S4	4.2		2014- 06-10	No Photo Available
<u>Poa sierrae</u>	Sierra blue grass	Poaceae	perennial rhizomatous herb	Apr-Jul	None	None	G3	S3	1B.3	Yes	2010- 06-10	© 2012 Belinda Lo
<u>Polygonum</u> <u>bidwelliae</u>	Bidwell's knotweed	Polygonaceae	annual herb	Apr-Jul	None	None	G4	S4	4.3	Yes	1974- 01-01	©2020 Neal Kramer
<u>Sagittaria</u> sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May- Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984- 01-01	©2013 Debra L. Cook
<u>Sidalcea</u> g <u>igantea</u>	giant checkerbloom	Malvaceae	perennial rhizomatous herb	(Jan- Jun)Jul- Oct	None	None	G3	S3	4.3	Yes	2012- 07-10	©2018 Sierra Pacific Industries
<u>Sidalcea</u> <u>robusta</u>	Butte County checkerbloom	Malvaceae	perennial rhizomatous herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1974- 01-01	© 2010 George W Hartwell
<u>Streptanthus</u> <u>drepanoides</u>	sickle-fruit jewelflower	Brassicaceae	annual herb	Apr-Jun	None	None	G4	S4	4.3	Yes	1988- 01-01	©2012 Julie Kierstead Nelson

Streptanthus longisiliquus	long-fruit jewelflower	Brassicaceae	perennial herb	Apr-Sep	None	None	G3	S3	4.3	Yes	2007- 08-31	©2008 Sierra Pacific Industries
<u>Trifolium</u> jokerstii	Butte County golden clover	Fabaceae	annual herb	Mar-May	None	None	G2	S2	1B.2	Yes	2001-01-01	© 2008 George W Hartwell
<u>Tuctoria</u> g <u>reenei</u>	Greene's tuctoria	Poaceae	annual herb	May- Jul(Sep)	FE	CR	G1	S1	1B.1	Yes	1974- 01-01	©2008 F. Gauna
<u>Viola</u> tomentosa	felt-leaved violet	Violaceae	perennial herb	(Apr)May- Oct	None	None	G3	S3	4.2	Yes	1974- 01-01	No Photo Available
Wolffia brasiliensis	Brazilian watermeal	Araceae	perennial herb (aquatic)	Apr-Dec	None	None	G5	S2	2B.3		2001- 01-01	© 2021 Scot Loring

Showing 1 to 63 of 63 entries

Suggested Citation:

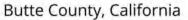
California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 1 December 2023].

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location





Local office

Sacramento Fish And Wildlife Office

(916) 414-6600

(916) 414-6713

Federal Building 2800 Cottage Way, Room W-2605 Sacramento, CA 95825-1846



Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME

Giant Garter Snake Thamnophis gigas

Threatened

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/4482

Northwestern Pond Turtle Actinemys marmorata

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/1111

Proposed Threatened

Insects

NAME STATUS

Monarch Butterfly Danaus plexippus

Candidate

Wherever found

No critical habitat has been designated for this species.

https://ecos.fws.gov/ecp/species/9743

Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/7850

Threatened

Crustaceans

NAME STATUS

Conservancy Fairy Shrimp Branchinecta conservatio

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/8246

Endangered

Vernal Pool Fairy Shrimp Branchinecta lynchi

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp Lepidurus packardi

Wherever found

There is $\mbox{{\bf final}}$ critical habitat for this species. Your location does

not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/2246

Endangered

Threatened

Flowering Plants

NAME

Butte County Meadowfoam Limnanthes floccosa ssp.

Endangered

californica

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

https://ecos.fws.gov/ecp/species/4223

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds
 https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME BREEDING SEASON

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Jan 1 to Aug 31

Golden Eagle Aquila chrysaetos

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

https://ecos.fws.gov/ecp/species/1680

Breeds Jan 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and

understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

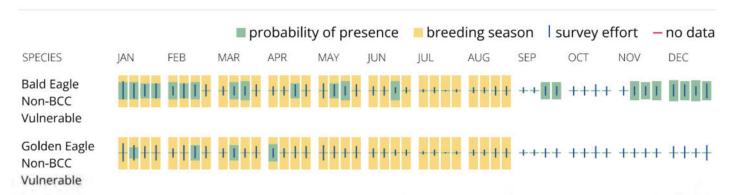
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply). To see a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey, banding, and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the <u>Eagle Act</u> should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds
 https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME BREEDING SEASON

Bald Eagle Haliaeetus leucocephalus

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Jan 1 to Aug 31

Belding's Savannah Sparrow Passerculus sandwichensis beldingi

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8

Breeds Apr 1 to Aug 15

Black Tern Chlidonias niger

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093 Breeds May 15 to Aug 20

Bullock's Oriole Icterus bullockii

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA Breeds Mar 21 to Jul 25

California Gull Larus californicus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 1 to Jul 31

Cassin's Finch Carpodacus cassinii

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462

Breeds May 15 to Jul 15

Clark's Grebe Aechmophorus clarkii

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

Common Yellowthroat Geothlypis trichas sinuosa

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084

Breeds May 20 to Jul 31

Golden Eagle Aquila chrysaetos

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Breeds Jan 1 to Aug 31

https://ecos.fws.gov/ecp/species/1680

Lawrence's Goldfinch Carduelis lawrencei

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 20 to Sep 20

https://ecos.fws.gov/ecp/species/9464

Nuttall's Woodpecker Picoides nuttallii

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410

Breeds Apr 1 to Jul 20

Oak Titmouse Baeolophus inornatus

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656

Breeds Mar 15 to Jul 15

Tricolored Blackbird Agelaius tricolor

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910

Breeds Mar 15 to Aug 10

Western Grebe aechmophorus occidentalis

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743

Breeds Jun 1 to Aug 31

Wrentit Chamaea fasciata

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Yellow-billed Magpie Pica nuttalli

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726

Breeds Apr 1 to Jul 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (I)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

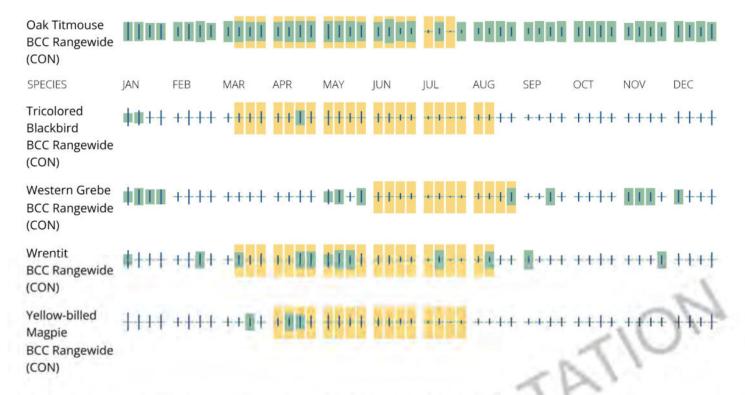
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey, banding, and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>Rapid Avian Information Locator (RAIL) Tool</u>.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the <u>RAIL Tool</u> and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

R4SBC

A full description for each wetland code can be found at the <u>National Wetlands Inventory</u> website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and

nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



Quad Name Oroville

Quad Number 39121-E5

ESA Anadromous Fish

SONCC Coho ESU (T) -

CCC Coho ESU (E) -

CC Chinook Salmon ESU (T) -

CVSR Chinook Salmon ESU (T) - X

SRWR Chinook Salmon ESU (E) -

NC Steelhead DPS (T) -

CCC Steelhead DPS (T) -

SCCC Steelhead DPS (T) -

SC Steelhead DPS (E) -

CCV Steelhead DPS (T) -

Eulachon (T) -

sDPS Green Sturgeon (T) - X

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -

CCC Coho Critical Habitat -

CC Chinook Salmon Critical Habitat -

CVSR Chinook Salmon Critical Habitat - X

SRWR Chinook Salmon Critical Habitat -

NC Steelhead Critical Habitat -

CCC Steelhead Critical Habitat -

SCCC Steelhead Critical Habitat -

SC Steelhead Critical Habitat -

CCV Steelhead Critical Habitat - X

Eulachon Critical Habitat -

sDPS Green Sturgeon Critical Habitat - X

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) Olive Ridley Sea Turtle (T/E) Leatherback Sea Turtle (E) North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) Fin Whale (E) Humpback Whale (E) Southern Resident Killer Whale (E) North Pacific Right Whale (E) Sei Whale (E) Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH Chinook Salmon EFH
Groundfish EFH Coastal Pelagics EFH Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds
See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans - MMPA Pinnipeds -

APPENDIX B

Representative Site Photographs



Photo 1. Unnamed intermittent creek



Photo 3. Seasonal Wetland Swale 1



Photo 5. Vernal Pool 1



Photo 2. Upstream side of unnamed intermittent creek where it enters Study Area through a culvert .



Photo 4. Upland sampling point 3



Photo 6. Upland sampling point 6





Photo 7. Seasonal Wetland Swale 2



Photo 9. Overview of Study Area looking north



Photo 8. Overview of Study Area looking west



Photo 10. Overview of Study Area looking east

APPENDIX C

List of Plant Species Observed within the Study Area

Plants Observed Onsite (October 19, 2023)

Scientific Name Common Name

Alisima triviale Northern water plantain

Avena sp.* Wild oat

Briza maxima* Rattlesnake grass
Briza minor* Little quaking grass
Browns diandrus* Pingut brown

Bromus diandrus* Ripgut brome
Bromus hordeaceus* Soft brome
Bromus rubens* Foxtail brome
Centaurea solstitialis* Yellow star-thistle
Centromadia sp. Tarweed species
Convolvulus arvensis* Field bindweed
Croton setiger Turkey mullein

Cynodon dactlyon*

Cyperus sp.

Eleocharis palustris

Elymus caput-medusae*

Turkey Hullell

Bermuda grass

Nutsedge species

Common spike-rush

Medusahead grass

Eucalyptus globulus* Blue gum eucalyptus
Festuca perennis* Annual ryegrass
Frangula californica Coffeeberry

Grindelia camporum Common gumplant

Heteromeles arbutifolia Toyon

Erodium botrys*

Hordeum marinum* Mediterranean barley

Juglans hindsii Northern California black walnut

Broadleaf filaree

Juncus effususSoft rushLactuca serriola*Prickly lettuceLeontodon saxatillis*Lesser hawkbitLythrum hyssopifolium*Hyssop loosestrife

Morus alba* Mulberry

Olea europaea* European olive
Paspalum dilatatum* Dallis grass
Persicaria hydropiperoides Water pepper
Pistacia chinensis* Chinese pistache

Polypogon monspeliensis* Annual rabbit's-foot grass
Populus fremontii Fremont's cottonwood

Quercus douglasii Blue oak

Ouercus wislizeni Interior live oak

Rubus armeniacus* Himalayan blackberry

Rumex crispus* Curly dock

Schoenoplectus acutus Hard-stem club-rush

Sesbania punicea*
Toxicodendron diversilobum
Triadica sebifera*
Trichostema lanceolatum
Tridens flavus*
Trifolium hirtum*
Typha angustifolia*
Vitis californica

Red wisteria
Poison oak
Chinese tallowtree
Vinegar weed
Purpletop tridens

Rose clover

Narrow leaf cattail California wild grape

^{* -} Non-native Species

APPENDIX D

List of Wildlife Species Observed within the Study Area

Wildlife Species Observed Onsite (October 19, 2023)

Scientific Name	Common Name
Cathartes aura	Turkey vulture
Calypte anna	Anna's hummingbird
Melanerpes formicivorus	Acorn woodpecker
Sayornis nigricans	Black phoebe
Aphelocoma californica	California scrub jay
Corvus brachyrhynchos	American crow
Baeolophus inornatus	Oak titmouse
Sturnus vulgaris	European starling
Bombycilla cedrorum	Cedar waxwing
Melozone crissalis	California towhee
Mimus polyglottos	Northern mockingbird
Passer domesticus	House sparrow
Haemorhous mexicanus	House finch

APPENDIX D

Appendix D – Aquatic Resources Delineation. ECORP, 2023

Aquatic Resources Delineation for the Table Mountain RV Resort Project

Butte County, California

Prepared For:

Melton Design Group

Prepared By:



2525 Warren Drive Rocklin, California 95677

November 15, 2023

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Description
°F	Fahrenheit
Agencies	USEPA and Department of the Army
ARD	Aquatic Resources Delineation
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FR	Federal Register
GPS	Global Positioning System
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
OBL	Obligate
OHWM	Ordinary high water mark
RWQCB	Regional Water Quality Control Board
Study Area	Table Mountain RV Resort Project
UPL	Upland
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

On behalf of Melton Design Group, ECORP Consulting, Inc. conducted an Aquatic Resources Delineation (ARD) for the approximately 20.96-acre proposed Table Mountain RV Resort Project (Study Area) located in Butte County, California. The Study Area is located west of State Route 70, north of Nelson Avenue, and east of Hearthstone School in the City of Oroville, California (Figure 1). The Study Area corresponds to a portion of Section 01, Township 19 North, and Range 03 East and a portion of Section 06 and 07, Township 19 North, and Range 04 East (Mount Diablo Base and Meridian) of the "Oroville, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 1992). The approximate center of the Study Area is located at 39.525576° latitude and -121.576625° longitude and is located within Honcut Creek-Lower Feather Watershed (Hydrologic Unit Code #18020159; Natural Resources Conservation Service [NRCS] et al. 2016). Driving directions to the Study Area are included as Appendix A.

This report describes aquatic resources identified within the Study Area that may be regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA). The information presented in this report provides data required by the USACE Sacramento District's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2016a). The aquatic resource boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the Study Area and are subject to modification following the USACE verification process.

The purpose of this report is to provide adequate information to USACE for the issuance of an Approved Jurisdictional Determination.

2.0 REGULATORY SETTING

2.1 Waters of the United States

This report describes aquatic resources, including wetlands, that may be regulated by USACE under Section 404 and/or the Regional Water Quality Control Board (RWQCB) under Section 401 of the federal CWA. The following sections define these regulations.

2.1.1 Wetlands

Wetlands are "those areas that are inundated or saturated by surface or groundwater 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" [51 Federal Register (FR) 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. Wetlands can be perennial or intermittent.

2.2 Clean Water Act

The USACE regulates discharge of dredged or fill material into Waters of the U.S. under Section 404 of the CWA. "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; sitedevelopment fills for recreational, industrial, commercial, residential, and other uses; causeways or road

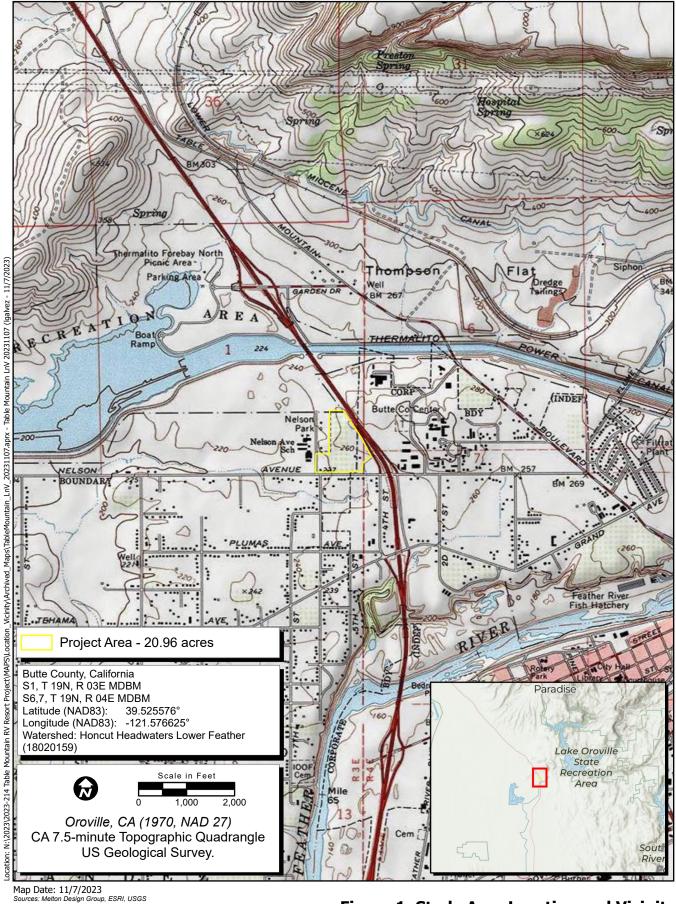


Figure 1. Study Area Location and Vicinity



fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 Code of Federal Regulations Section 328.2(f)]. In addition, Section 401 of the CWA (33 U.S. Code 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands (over 0.5 acre of impact) may require an individual permit. Projects that only minimally affect wetlands (less than 0.5 acre of impact) may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the RWQCB.

2.3 Jurisdictional Assessment

On December 22, 2022, the U.S. Environmental Protection Agency (USEPA) and Department of the Army (Agencies) announced a final rule defining Waters of the U.S. The definition was founded upon the pre-2015 "Rapanos" decision, updated to reflect consideration of U.S. Supreme Court decisions, the science, and the Agencies' technical expertise. The final rule was published in the FR on January 18, 2023 and effective as of March 20, 2023.

On May 25, 2023, the U.S. Supreme Court adopted a narrower definition of Waters of the U.S. in the case *Sackett v. Environmental Protection Agency*. Under the majority opinion, Waters of the U.S. refers to "geographical features that are described in ordinary parlance as 'streams, oceans, rivers, and lakes' and to adjacent wetlands that are 'indistinguishable' from those bodies of water due to a continuous surface connection."

On August 29, 2023 the Agencies issued a final rule to amend the final "Revised Definition of 'Waters of the United States'" rule, published in the FR on January 18, 2023. This final rule conforms the definition of "waters of the United States" to the U.S. Supreme Court's May 25, 2023 decision in the case of Sackett v. Environmental Protection Agency. Parts of the January 2023 Rule are invalid under the Supreme Court's interpretation of the CWA in the Sackett decision. Therefore, the Agencies have amended key aspects of the regulatory text to conform to the Court's decision.

The conforming rule became effective upon publication in the FR on September 9, 2023. Where the January 2023 Rule is not enjoined, the agencies will implement the January 2023 Rule, as amended by the conforming rule.

In summary, under the conforming rule, the term Waters of the U.S. mean:

- "Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- The territorial seas;
- Interstate waters;
- Impoundments of waters otherwise defined as waters of the United States under this definition;

- Tributaries of a) Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, b) the territorial seas, and c) interstate waters;
- Wetlands adjacent to a) Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, b) the territorial seas, and c) interstate waters: or
- Wetlands adjacent (defined as having a continuous surface connection) to relatively permanent, standing or continuously flowing bodies of water identified as impoundments of waters and with a continuous surface connection to those waters.
- Intrastate lakes and ponds that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters previously identified."

Waters excluded from this definition include prior converted cropland (defined by the U.S. Department of Agriculture), waste treatment systems, ditches (including roadside ditches) excavated wholly in and draining only dry land, artificially irrigated areas that would revert to dry land if the irrigation ceased, artificial lakes or ponds, artificial reflecting pools or swimming pools, waterfilled depressions (e.g., created in dry land incidental to construction activity, pits excavated in dry land for purposes of obtaining fill, sand, or gravel), swales and erosional features (e.g., gullies, small washes) that are characterized by low volume, infrequent, or short duration flow).

2.4 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB 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 Waste Discharge Requirements for these activities.

3.0 METHODS

This ARD was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). Nonwetland waters were identified in the field according to *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West*

Region of the Western United States (USACE 2008b), where applicable. The boundaries of aquatic resources were delineated through standard field methods (e.g., paired sample set analyses) and aerial photograph interpretation. Field data were recorded on Wetland Determination Data Forms – Arid West Region and Arid West Ephemeral and Intermittent Streams OHWM Datasheet (Appendix B). Munsell Soil Color Charts (Munsell Color 2009) and the Web Soil Survey (NRCS 2023a) were used to aid in identifying hydric soils in the field. The Jepson eFlora (Jepson eFlora Project [eds.] 2022) was used for plant nomenclature and identification.

The field survey was conducted on October 19 and November 8, 2023 by ECORP Senior Biologist Dan Machek. The biologist walked the entire Study Area to assess the site conditions of the Study Area and collect ARD data. Aquatic resources within the Study Area were recorded in the field using a post-processing capable Global Positioning System (GPS) unit with submeter accuracy (e.g., Android, Collector for ArcGIS application with Geode GNS3 submeter GPS unit with real-time correction).

3.1 Routine Determinations for Wetlands

To be determined a wetland, the following three criteria must be met:

- A majority of dominant vegetation species are wetland-associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

3.1.1 Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The dominance test is the basic hydrophytic vegetation indicator and was applied at each sampling point location. The "50/20 rule" was used to select the dominant plant species from each stratum of the community. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of coverage and cumulatively totaled) that immediately exceed 50 percent of the total coverage for the stratum, plus any additional species that individually comprise 20 percent or more of the total cover in the stratum (USACE 1992, 2016a).

Dominant plant species observed at each sampling point were then classified according to their indicator status (probability of occurrence in wetlands; Table 1), *National Wetland Plant List* (USACE 2020). If the majority (more than 50 percent) of the dominant vegetation on a site are classified as Obligate (OBL), Facultative Wetland (FACW), or Facultative (FAC), the site was considered to be dominated by hydrophytic vegetation.

Table 1. Classification of Wetland-Associated Plant Species ¹							
Plant Species Classification	Abbreviation	Probability of Occurring in Wetland					
Obligate	OBL	Almost always occur in wetlands					
Facultative Wetland	FACW	Usually occur in wetlands, but may occur in nonwetlands					
Facultative	FAC	Occur in wetlands and nonwetlands					
Facultative Upland	FACU	Usually occur in nonwetlands, but may occur in wetlands					
Upland	UPL	Almost never occur in wetlands					
Plants That Are Not Listed (assumed upland species)	N/L	Does not occur in wetlands in any region.					

¹Source: USACE 2020

In instances where indicators of hydric soil and wetland hydrology were present, but the plant community failed the dominance test, the vegetation was reevaluated using the Prevalence Index. The Prevalence Index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). If the plant community failed the Prevalence Index, the presence/absence of plant morphological adaptations to prolonged inundation or saturation in the root zone was evaluated.

3.1.2 **Soils**

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (NRCS 2003a). Indicators that a hydric soil is present include, but are not limited to, histosols, histic epipedon, hydrogen sulfide, depleted below dark surface, sandy redox, loamy gleyed matrix, depleted matrix, redox dark surface, redox depressions, and vernal pools.

A soil pit was excavated at each sampling point to the depth needed to document an indicator, to confirm the absence of indicators, or until refusal at each sampling point. The soil was then examined for hydric soil indicators. Soil colors were determined while the soil was moist using the *Munsell Soil Color Charts* (Munsell Color 2009). Hydric soils are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds in a saturated and anaerobic environment. These processes and the features in the soil that develop can be identified by looking at the color and texture of the soils.

3.1.3 Hydrology

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to, visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water

marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to, drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard.

4.0 RESULTS

4.1 Existing Site Conditions

The Study Area is located within relatively flat to gently rolling terrain situated at an elevational range of approximately 245 to 275 feet above mean sea level in the Northern High Sierra Nevada Foothills subregion of the Cascade Range Foothills floristic region of California (Baldwin et al. 2012). At the Oroville reporting station, approximately 1.1 miles southwest of the Study Area, the average winter temperature is 49.9 degrees Fahrenheit (°F) and the average summer temperature is 77.8 °F. Average annual precipitation is approximately 30.56 inches, which falls as rain (National Oceanic and Atmospheric Administration 2023).

The Study Area is comprised of an undeveloped privately owned parcel with access from the south on Nelson Avenue. The adjacent land uses include residential apartments and rural residences to the south, Hearthstone school to the west, and Nelson Park to the north. State Route 70 and the Butte County Superior Court and Sheriff's Office are to the east of the Study Area.

The majority of the Study Area is composed of annual grassland, a vegetation community dominated by perennial ryegrass (*Festuca perennis*), wild oats (*Avena* sp.), medusa head (*Taeniatherum caput-medusae*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and broadleaf filaree (*Erodium botrys*). Scattered trees and shrubs occur within the annual grassland. The creek in the southeast corner of the Study Area is composed of the *Eucalyptus* spp. Woodland Semi-Natural Alliance, a vegetation community dominated by *Eucalyptus* species. Blue gum eucalyptus (*Eucalyptus globulus*) was the dominant tree species in the overstory with European olive (*Olea europaea*) and cherry plum (*Prunus cerasifera*) as shrub and sapling layer. Subdominant shrubs and saplings include Himalayan blackberry (*Rubus armeniacus*), scarlet wisteria (*Sesbania punicea*), northern California black walnut (*Juglans hindsii*), blue oak (*Quercus douglasii*), and interior live oak (*Quercus wislizeni*). Dominant plant species in the herbaceous layer include water pepper (*Persicaria hydropiperoides*), nut sedge (*Cyperus sp.*), soft rush (*Juncus effusus*), and perennial ryegrass (*Festuca perenne*).

This ARD was conducted in the fall, outside of the blooming season for most plant species. The survey was conducted at a time of the year that is suboptimal to observe plant reproductive structures, especially identifying grasses to species level, although most plants were identifiable to species based upon vegetative or fruit morphology. This was also a time of year that is suboptimal for observing wetland hydrology, particularly of ephemeral features. According to the Antecedent Precipitation Tool developed by the USACE, the delineation was performed during the dry season, the conditions were wetter than normal with respect to the season, and the Drought Index was "mild wetness" (Appendix C).

4.1.1 National Wetlands Inventory

The National Wetlands Inventory (NWI; U.S. Fish and Wildlife Service [USFWS] 2023) is a nationwide map and database of surface waters and related habitats. The NWI includes aquatic resource features mapped using a variety of remote sensing and modeling techniques. As such, these aquatic features may or may not exist as represented. In addition, NWI data varies in detail, accuracy, and age, and is meant to be used as a tool to assist with an ARD but not as the only source of information.

According to the NWI (USFWS 2023), the unnamed creek is the only aquatic feature mapped within the Study Area (Figure 2). The unnamed creek is classified as Riverine Intermittent Streambed Seasonally Flooded according to the Cowardin Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

4.1.2 Soils

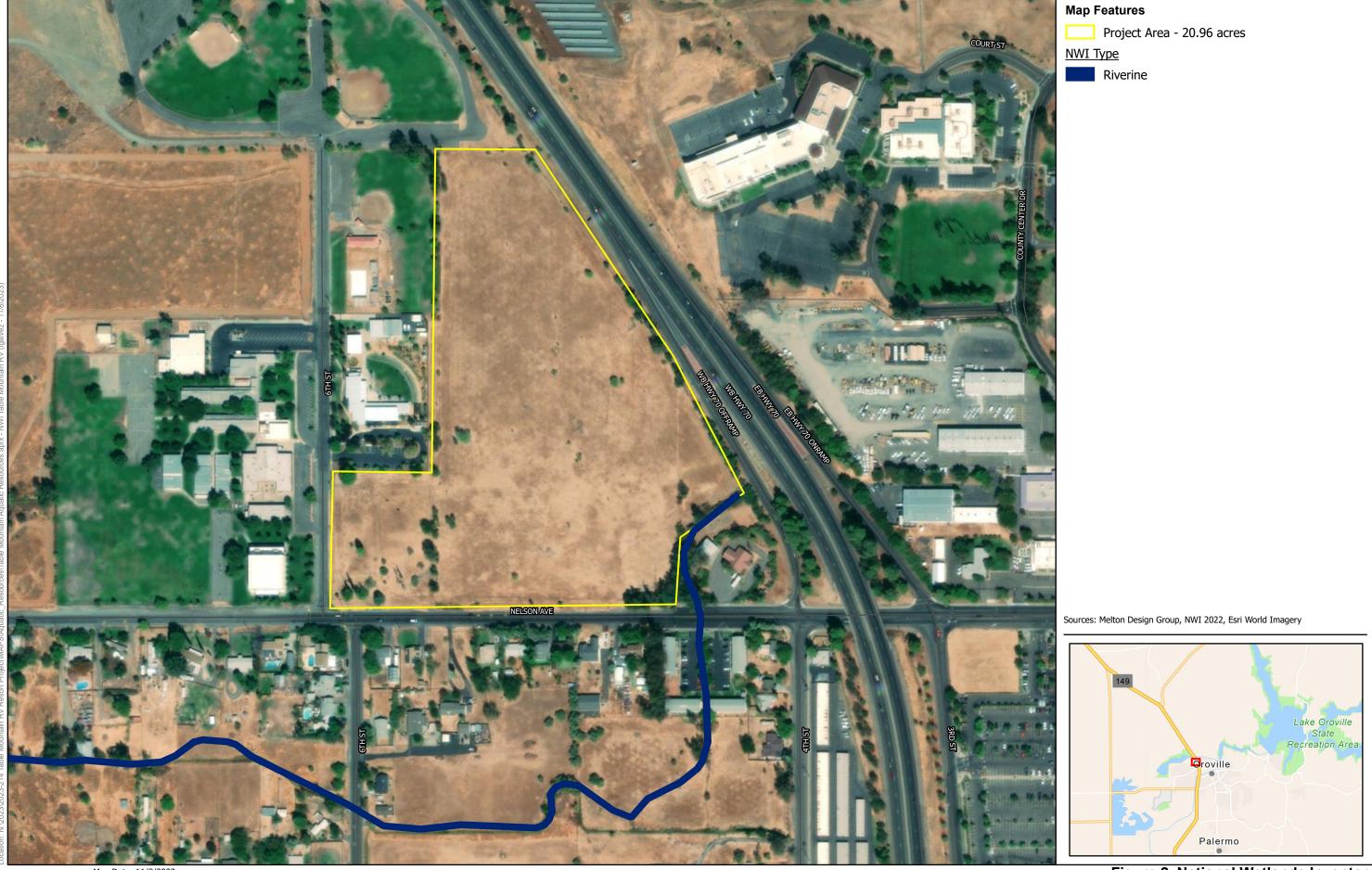
According to the Web Soil Survey (NRCS 2023a), one soil unit, or type, has been mapped within the Study Area (Figure 3):

■ 318 – Thompsonflat-Oroville, 0 to 9 percent slopes

Thompsonflat-Oroville, 0 to 9 percent slopes soil unit is comprised of approximately 50 percent Thompsonflat, fine sandy loam and approximately 40 percent Oroville, gravely fine sandy loam. The remaining 10 percent is composed of the minor components Fernandez, sandy loam; Unnamed, loamy, duripan 10 to 20 inches; and, Unnamed, fine-loamy, bedrock densic 40 to 60 inches. Thompsonflat, fine sandy loam and minor components Fernandez, sandy loam and Unnamed fine-loamy, bedrock densic 40 to 60 inches are not considered hydric. Oroville, gravely fine sandy loam and minor component Unnamed, loamy, duripan 10 to 20 inches are considered hydric (Table 2) (NRCS 2023b).

Table 2. Soil Units Occurring within the Sto	udy Area ¹	
Soil Unit	Hydric Components ²	Hydric Component Landform
318 – Thompsonflat-Oroville, 0 to 9 percent slopes	Oroville	Fan remnants

¹Source: NRCS 2023a ²Source: NRCS 2023b

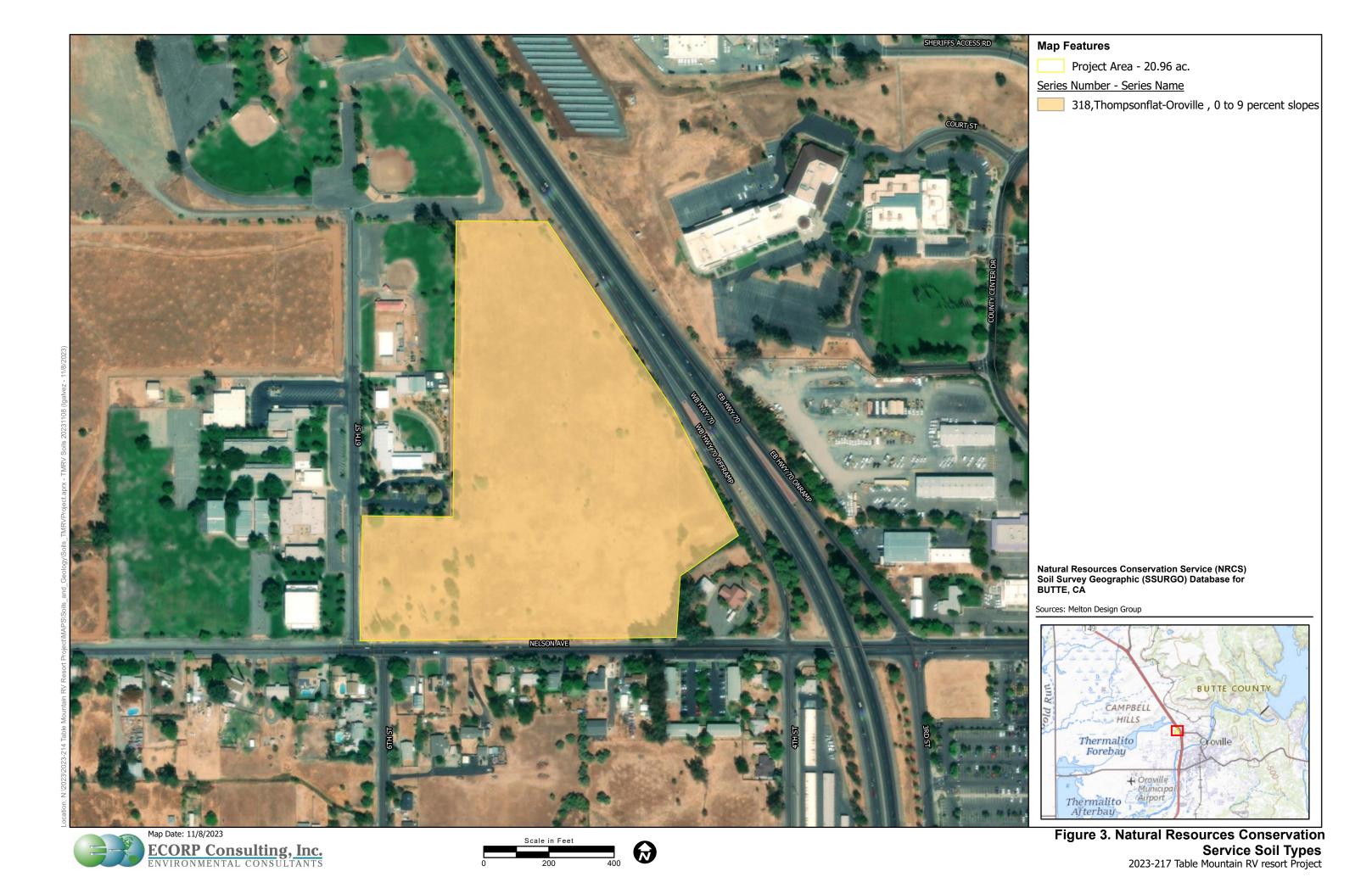


ECORP Consulting, Inc. ENVIRONMENTAL CONSULTANTS

Scale in Feet

200 400

Figure 2. National Wetlands Inventory



4.2 Aquatic Resources

A total of 0.116 acre of aquatic resources have been mapped within the Study Area (Table 3). The OHWM determination data forms are included in Appendix B, and a list of plant species observed within the Study Area is included as Appendix D. A discussion of the aquatic resources is presented below, and the ARD map is presented on Figure 4.

Table 3. Aquatic Resources					
Туре	Acreage ¹				
Wetlands:					
Vernal Pool	0.036				
Seasonal Wetland	0.031				
Seasonal Wetland Swale	0.04				
Other Waters:					
Intermittent Creek	0.009				
Total	0.116				

¹Acreages represent a calculated estimation and are subject to modification following the USACE verification process.

Representative site photographs are included as Appendix E. The USACE Operations and Maintenance Business Information Link Regulatory Module (ORM) aquatic resources table of potential Waters of the U.S. is included in Appendix F.

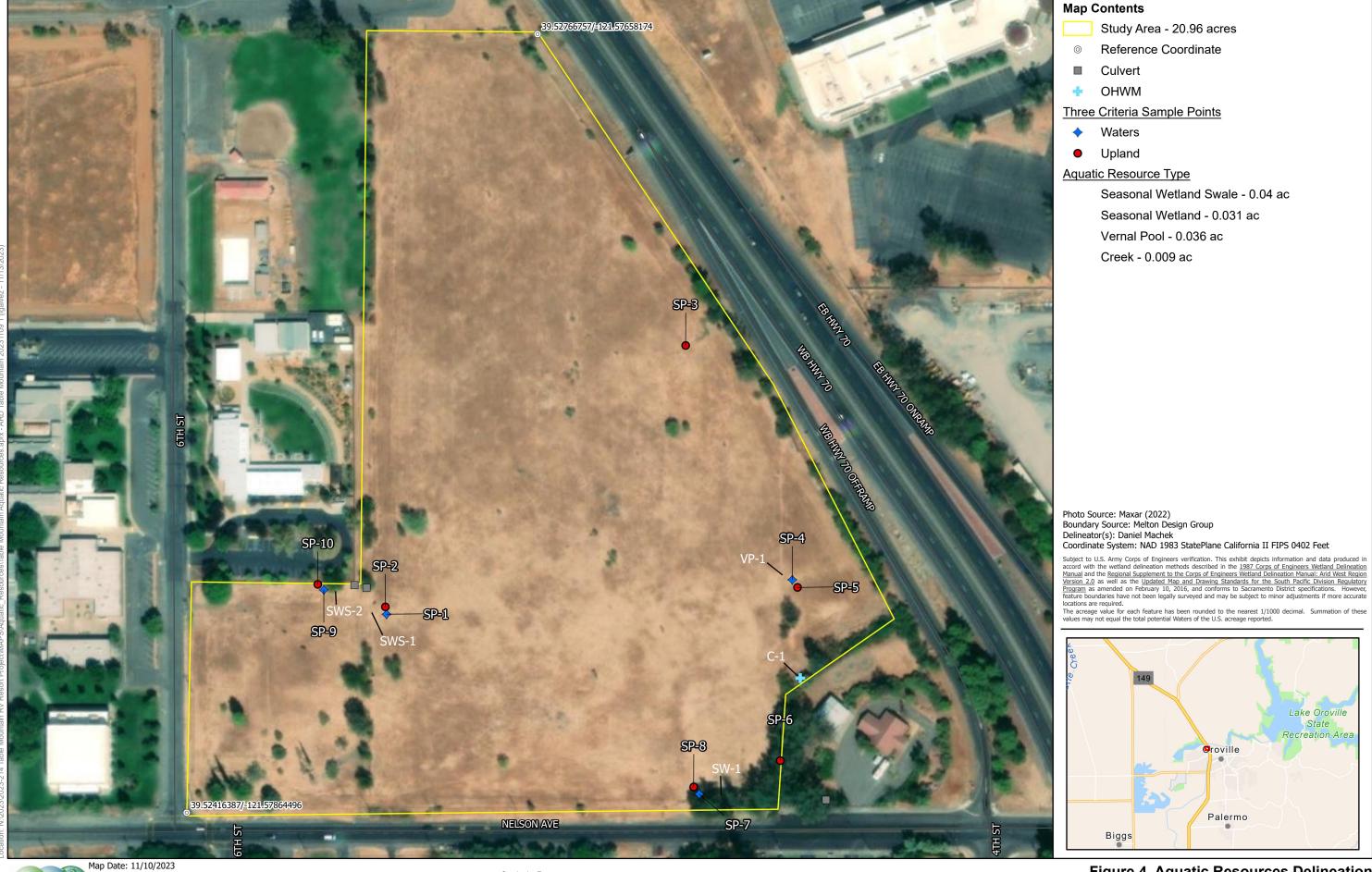
4.2.1 Other Waters

4.2.1.1 Intermittent Creek

Intermittent creeks are medium-order creeks that have seasonal surface water flow during the wet or rainy season. Intermittent creeks may not have surface water during dry periods. Runoff from precipitation is a supplemental source of water for stream flow. Intermittent streams often have narrower riparian corridors due to a deeper water table than perennial stream systems. The unnamed intermittent creek within the Study Area exhibits an OHWM (Figure 4). The OHWM was delineated in the field based on the presence of changes in average sediment texture, changes in vegetation species and cover, bed and bank, and break in bank slope.

The unnamed intermittent creek was sparsely vegetated below the OHWM within the Study Area. Dominant plant species observed below the OHWM within the Study Area included water pepper, soft rush, and nutsedge. The unnamed intermittent creek was moderately vegetated above the OHWM within the Study Area. Plant species observed above the OHWM of the unnamed intermittent creek included blue gum eucalyptus, wild olive, and cherry plum in the tree stratum; cherry plum, wild olive, Himalayan blackberry (*Rubus armeniacus*), and red wisteria in the shrub/sapling stratum; and ripgut brome and wild oats in the herbaceous stratum.

The Unnamed intermittent creek is approximately 2 feet wide within the Study Area and had 1 to 2 inches of flowing water present during the site visit. The biologist mapped 0.009 acre (204 linear feet) of intermittent creek within the Study Area.









4.2.2 Wetlands

4.2.2.1 Vernal Pool

Vernal pools are topographic basins within a grassland community that are typically underlain with an impermeable or semipermeable soil layer near the surface, such as a hardpan or duripan. Direct rainfall and surface runoff inundate the pools during the wet season. The pools typically remain inundated and/or saturated through spring and are dry by late spring through the following wet season. A total of 0.036-acre of vernal pools was mapped within the Study Area. Sampling point 4 (Appendix B) was collected within the one vernal pool observed within the Study Area.

Dominant plant species with the vernal pool included common spike-rush (*Eleocharis palustris*, OBL) and annual rabbit's-foot grass (*Polypogon monspeliensis*, FACW). The vernal pool within the Study Area met the hydrophytic vegetation criterion by passage of the Dominance Test. The hydric soil criterion was met by the presence of Redox Depressions (F8). Hydrology indicators included Inundation Visible on Aerial Imagery (B7), Biotic Crust (B12), and FAC-Neutral Test (D5).

4.2.2.2 Seasonal Wetland

Seasonal wetlands are ephemerally wet due to accumulation of surface runoff and rainwater within low-lying areas. Inundation periods tend to be relatively short and they are commonly dominated by nonnative annual and sometimes perennial hydrophytic species. A total of 0.031 acre of seasonal wetlands was mapped within the Study Area. Sampling point 7 (Appendix B) was taken within the one seasonal wetland observed within the Study Area.

Dominant plant species within the seasonal wetland included annual rabbit's-foot grass (FACW). The seasonal wetland met the hydrophytic vegetation criterion by passage of the Dominance Test. The hydric soil criterion was met by the presence of Redox Depressions (F8). Hydrology indicators included Surface Soil Cracks (B6), Water-Stained Leaves (B9), and Biotic Crust (B12), and FAC-Neutral Test (D5).

4.2.2.3 Seasonal Wetland Swale

Seasonal wetland swales are generally linear wetland features that convey precipitation runoff and support a predominance of hydrophytic vegetation, hydric soil, and wetland hydrology, but do not exhibit an OHWM. These are typically inundated for short periods during and immediately after rain events, but usually maintain soil saturation for longer periods during the wet season. Two seasonal wetland swales (total of 0.04 acre) were delineated within the Study Area. Sampling points 1 and 9 (Appendix B) were taken within the seasonal wetland swales.

Dominant plant species within the seasonal wetland swales included perennial ryegrass (FAC). The seasonal wetland swales met the hydrophytic vegetation criterion by passage of the Dominance Test. The hydric soil criterion was met by the presence of Redox Depressions (F8) in both seasonal wetland swales in addition to the presence of Redox Dark Surface (F6) at sampling point 1. Hydrology indicators included Biotic Crust (B12).

5.0 CONCLUSION

A total of 0.116 acre of aquatic resources have been mapped within the Study Area. This acreage represents a calculated estimation of the extent of aquatic resources within the Study Area and is subject to modification following USACE review and/or the verification process. The placement of dredged or fill material into Waters of the U.S. would require a permit pursuant to Section 404 of the CWA and certification or waiver in compliance with Section 401 of the CWA. The placement of dredge or fill material into Waters of the State that are not Waters of the U.S. would require issuance of a Waste Discharge Requirement by the state or RWQCB.

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Appendix A – Driving Directions to Study Area

Appendix B – Wetland and OHWM Datasheets - Arid West

Appendix C – Antecedent Precipitation Tool

Appendix D – Plant Species Observed Onsite

Appendix E – Representative Site Photographs

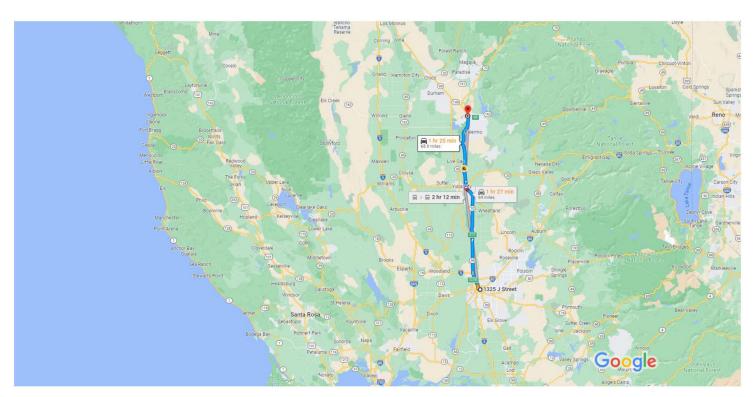
Appendix F – USACE ORM Aquatic Resources Table

APPENDIX A

Driving Directions to Study Area

1325 J St, Sacramento, CA 95814 to 39.5241462, -121.5764477

Table Mountain RV Resort Project Location



Map data ©2023 Google 10 mi

1325 J St Sacramento, CA 95814

Get on I-5 N from I St

		4 min (1	1.2 mi)
↑	1.	Head east on J St toward 14th St	,
_	_	T 1 (1 1 - 1 4) - 0;	190 ft
7	2.	Turn left onto 14th St	
_	2	Turn left auto I Ct	420 ft
``	3.	Turn left onto I St	
^	1	Use the right 2 lanes to turn right onto the I-5	0.7 mi
\wedge	4.	3	
		N/State Hwy 99 ramp to Redding/Yuba City	
			0.3 mi

Take CA-99 N and CA-70 N to 3rd St in Oroville. Take exit 48 from CA-70 N $\,$

_	_		1 hr 9 min (67.3 mi)
X	5.	Merge onto I-5 N	
			5.8 mi

r	6.	Use the right 2 lanes to take exit 525B for Cotoward Yuba City/Marysville	4-99 N
↑	7.	Continue onto CA-99 N	- 0.7 mi
*	8.	Use the right lane to take the CA-70 ramp to Marysville/Oroville	11.8 mi
↑	9.	Continue onto CA-70 N	0.6 mi
\rightarrow	10.	Turn right onto 3rd St	20.9 mi
←	11.	Turn left onto B St Pass by Dollar General (on the right in 0.5 mi	- 0.2 mi)
↑	12.	Continue onto CA-70 N	_ 2.2 mi
r	13.	Take exit 48 for Grand Ave toward Nelson	
Conti	inue	on 3rd St. Drive to Nelson Ave	- 0.2 mi
1	14.		(0.5 mi)
←	15. ①	Turn left onto Nelson Ave Destination will be on the right	- 0.3 mi
			0.2 mi

39.5241462, -121.5764477

APPENDIX B

Wetland and OHWM Datasheets - Arid West

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Table Mountain RV Resort	Date: 10/19/2023 Time:
Project Number: 2023-217	Town: Oroville State: CA
Stream: Investigator(s): Dan Machek	Photo begin file#: Photo end file#:
Y X / N Do normal circumstances exist on the site?	Location Details: North of Nelson Ave., east of Hearthstone school, south of Nelson Park, west of SR 70
Y \(\sum / \) \(\overline{\text{X}}\) Is the site significantly disturbed?	Projection: Datum: NAD83
	Coordinates: 39.52416387, -121.57864496
Potential anthropogenic influences on the channel syst	ean:
N/A	
Brief site description: Site is mainly open ruderal grassland with scattered trees and shrul near the unnamed intermittent creek. The creek enters the east sid flows out of the south side of the property through another culvert	e of the property through a culvert that runs under SR 70 and
Checklist of resources (if available):	or Bush and a supplication of the State Supp
Aerial photography Stream gag	
Dates: Gage num	
Topographic maps Period of r	1000 COMM 1000 COMM
	y of recent effective discharges s of flood frequency analysis
	recent shift-adjusted rating
	neights for 2-, 5-, 10-, and 25-year events and the
1	recent event exceeding a 5-year event
Global positioning system (GPS)	y sun s v sun
Other studies	
Hydrogeomorphic F	Floodplain Units
Active Floodplain	Low Terrace
Low-Flow Channels	OHWM Paleo Channel
Procedure for identifying and characterizing the flood	lplain units to assist in identifying the OHWM:
1. Walk the channel and floodplain within the study area	to get an impression of the geomorphology and
vegetation present at the site.	
2. Select a representative cross section across the channel.	
3. Determine a point on the cross section that is character	ristic of one of the hydrogeomorphic floodplain units.
a) Record the floodplain unit and GPS position.	
b) Describe the sediment texture (using the Wentworth	class size) and the vegetation characteristics of the
floodplain unit.	
c) Identify any indicators present at the location.	loodulain units agrass the grass section
4. Repeat for other points in different hydrogeomorphic f	
5. Identify the OHWM and record the indicators. Record Mapping on aerial photograph	ana .
Digitized on computer	Other:
	J Outvi.

Project ID:	Cross section ID:	Date:	Time:
Cross section drawin	g:		
River	OHWI	M 2' River right	
Comments: OHWM was delineated in the vegetation species compositio the OHWM, vegetation became	age sediment texture station species station cover field based on the presence of conchanged from trees, shrubs, and me more sparse below the OHW	X Break in bank slope X Other: bed and bank Other: hange in average sediment textured upland vegetation to hydrophy	re (sediment became a silt), ytic herbaceous vegetation below the creek had a break in the bank
Floodplain unit:	Low-Flow Channel	Active Floodplain	Low Terrace
Characteristics of the float Average sediment texture Total veg cover: Community successions NA Early (herbaced)	podplain unit: re:% Shru	b:% Herb:% Mid (herbaceous, shrub Late (herbaceous, shrub	os, saplings)
Indicators: Mudcracks Ripples Drift and/or de Presence of bed Benches Comments:		Soil development Surface relief Other: Other: Other:	

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/Cour	nty: Oroville/	Butte	Sampling Date:	10/19/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	1
Investigator(s): Dan Machek		Section, T	ownship, Ra	nge: Section 01, T 19N,	R 03E	
Landform (hillside, terrace, etc.): terrace	L	ocal relief (co	oncave, conv	ex, none): concave	Slop	e (%):2
Subregion (LRR): <u>LRR C</u> Lat: <u>39.525059871</u>			Long: <u>-1</u>	21.577489535	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percent	nt slopes			NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the site typical for	this time of	year? `	Yes X	No (If no, expla	ain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No sig	gnificantly di	sturbed? A	re "Normal C	ircumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No na	aturally probl	ematic? (I	f needed, ex	olain any answers in Rem	arks.)	
SUMMARY OF FINDINGS – Attach site map	showing	g sampling	g point lo	cations, transects, i	mportant feat	ures, etc.
Hydrophytic Vegetation Present? Yes X No			Sampled A			
Hydric Soil Present? Wetland Hydrology Present? Yes X No		withir	n a Wetland	? Yes X	No	
Remarks: Seasonal wetland swale 1						
VEGETATION – Use scientific names of pla	ants.					
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:) 1.	% Cover	Species?	Status_	Dominance Test work		
2.				Number of Dominant S Are OBL, FACW, or FA	•	1(A)
3	-			Total Number of Domin Across All Strata:	•	1 (B)
	=	Total Cover		Percent of Dominant Sp	pecies That	
Sapling/Shrub Stratum (Plot size:) 1				Are OBL, FACW, or FA	.C: <u>100</u>	0.0% (A/B)
2.				Prevalence Index wor	ksheet:	
3.				Total % Cover of:	Multip	ply by:
4				OBL species	x 1 =	
5				FACW species	x 2 =	
Herb Stratum (Plot size: 5' r)	=	Total Cover		FAC species FACU species	x 3 =	
1. Festuca perennis	70	Yes	FAC	UPL species	x 5 =	
2. Hordeum marinum	10	No	FAC	Column Totals:	(A)	(B)
3. Rumex crispus	3	No	FAC	Prevalence Index =	` ′	`
4.						
5				Hydrophytic Vegetation	on Indicators:	
6				X Dominance Test is		
7				Prevalence Index is		
8		T-4-1-0		Morphological Adap	ptations (Provide s or on a separate s	
- Woody Vine Stratum (Plot size:)	83 =	Total Cover		Problematic Hydro	•	,
\						` ' '
1				¹ Indicators of hydric soi be present, unless distu		
	=	Total Cover		Hydrophytic		
				Vegetation		
% Bare Ground in Herb Stratum 10 % Co	ver of Biotic	Crust 5		Present? Yes _	X No	-
Remarks:						

SOIL Sampling Point: ____1

Profile Desc	ription: (Describe	to the depth	needed to doci	ument th	ne indica	tor or c	confirm the absence	of indicators.)		
Depth	Matrix		Redo	x Featur	es					
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks		
0-3	10YR 3/2	93	5YR 4/6	7	С	PL	Loamy/Clayey	Prominent redox concentrations		
3-12	10YR 3/2	93	5YR 4/6	7			Loamy/Clayey	Prominent redox concentrations		
¹ Type: C=Co	oncentration, D=Dep	letion, RM=R	teduced Matrix, C	S=Cove	red or Co	ated S	and Grains. ² Loc	ation: PL=Pore Lining, M=Matrix.		
	ndicators: (Applica							rs for Problematic Hydric Soils ³ :		
Histosol			Sandy Red		,			Muck (A9) (LRR C)		
Histic Epipedon (A2)			Stripped M		6)			Muck (A10) (LRR B)		
Black Histic (A3)			Loamy Mu		•			Manganese Masses (F12) (LRR D)		
— Hydrogei	n Sulfide (A4)		Loamy Gle	eyed Mat	rix (F2)			uced Vertic (F18)		
Stratified	Layers (A5) (LRR C	;)	Depleted N	-				Parent Material (F21)		
1 cm Muck (A9) (LRR D)			X Redox Dai	rk Surfac	e (F6)		Very	Shallow Dark Surface (F22)		
Depleted	Below Dark Surface	e (A11)	Depleted [Dark Sur	face (F7)		Othe	r (Explain in Remarks)		
Thick Da	rk Surface (A12)		X Redox De	pression	s (F8)					
Sandy M	ucky Mineral (S1)									
Sandy G	leyed Matrix (S4)	³ Indicators	of hydrophytic v	egetatio	n and we	tland hy	drology must be prese	ent, unless disturbed or problematic.		
Restrictive L	ayer (if observed):									
Type:										
Depth (ir	nches):		_				Hydric Soil Presen	t? Yes X No		
Remarks:										
HYDROLO	GY									
Wetland Hyd	drology Indicators:									
_	ators (minimum of o	ne is require	d; check all that	apply)			Seconda	ry Indicators (minimum of two required)		
Surface \	Water (A1)		Salt Crust	(B11)			Wate	er Marks (B1) (Riverine)		
High Wa	ter Table (A2)		X Biotic Crus	st (B12)			Sediment Deposits (B2) (Riverine)			
Saturation	on (A3)		Aquatic In	vertebrat	es (B13)		Drift	Deposits (B3) (Riverine)		
Water M	arks (B1) (Nonriver i	ne)	Hydrogen	Sulfide (Odor (C1)		Drain	nage Patterns (B10)		
Sedimen	t Deposits (B2) (No	nriverine)	Oxidized Rhizospheres on Living R				oots (C3) Dry-	Season Water Table (C2)		
Drift Dep	osits (B3) (Nonriver	ine)	Presence	of Reduc	ced Iron (C4)	Cray	fish Burrows (C8)		
Surface :	Soil Cracks (B6)		Recent Iro	n Reduc	tion in Til	led Soil	ls (C6) Satu	ration Visible on Aerial Imagery (C9)		
Inundatio	on Visible on Aerial I	magery (B7)	Thin Muck	Surface	(C7)		Shal	low Aquitard (D3)		
Water-St	tained Leaves (B9)		Other (Exp	olain in R	temarks)		FAC	-Neutral Test (D5)		
Field Observ	vations:									
Surface Water	er Present? Ye	es	No X	Depth (i	nches): _					
Water Table	Present? Ye	es	No <u>X</u>	Depth (i	nches): _					
Saturation Pr	resent? Ye	es	No X	Depth (i	nches): _		Wetland Hydrolo	gy Present? Yes X No No		
(includes cap	<u> </u>									
Describe Red	corded Data (stream	gauge, mon	itoring well, aeria	l photos,	previous	inspec	tions), if available:			
Remarks:										

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		_ City/Cour	nty: Oroville/	Butte	Sampling Date:	10/19/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	2
Investigator(s): Dan Machek		_Section, T	ownship, Rai	nge: Section 01, T 19N,	R 03E	
Landform (hillside, terrace, etc.): terrace	Loc	cal relief (co	ncave, conve	ex, none): concave	Slop	e (%):3_
Subregion (LRR): <u>LRR C</u> Lat: <u>39.5250931</u>			Long: <u>-1</u> :	21.5774962	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percer	nt slopes			NWI classific	cation: N/A	
Are climatic / hydrologic conditions on the site typical for	this time of ye	ear?	Yes X	No (If no, expl	ain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No si	gnificantly dis	turbed? A	re "Normal C	ircumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No na	aturally proble	matic? (If	f needed, exp	olain any answers in Rem	ıarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	sampling	g point loc	ations, transects, i	important feat	ures, etc.
Hydric Soil Present? Yes No	X X X		Sampled Arn a Wetland?		No_X_	
Remarks:		•				
VECETATION Has a significant and a significant	4					
VEGETATION – Use scientific names of pla		Dominant	Indicator			
Tree Stratum (Plot size:)		Species?	Status	Dominance Test work	sheet:	
1				Number of Dominant S	•	
2				Are OBL, FACW, or FA		0 (A)
3. 4.				Total Number of Domir Across All Strata:	•	2 (B)
	=T	otal Cover		Percent of Dominant S		(5)
Sapling/Shrub Stratum (Plot size:)				Are OBL, FACW, or FA	•	0% (A/B)
1				<u> </u>		
2. 3.				Prevalence Index wor Total % Cover of:		ply by:
4.				OBL species 0		р <u>гу Бу.</u> О
5.				FACW species 0		0
	=T	otal Cover		FAC species 0	x 3 =	0
Herb Stratum (Plot size: 5' r)				FACU species5		20
1. Taeniatherum caput-medusae		Yes	UPL	UPL species 90		50 70 (B)
Avena Cichorium intybus	40 –	Yes No	UPL FACU	Column Totals: 95	(,	70 (B)
		NO .	FACU	Prevalence Index =	B/A = 4.95	
5.				Hydrophytic Vegetation	on Indicators:	
6.				Dominance Test is		
7.				Prevalence Index is	s ≤3.0 ¹	
8.				Morphological Ada	•	
	95 =T	otal Cover			or on a separate s	,
Woody Vine Stratum (Plot size:)				Problematic Hydro		` ' '
1 2.				¹ Indicators of hydric solution be present, unless distributed by the present of		
*		otal Cover		·	arbod or problemat	
	<u> </u>			Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 5 % Co	over of Biotic (Crust 0	_	Present? Yes_	NoX	_
Remarks:						

SOIL Sampling Point: 2

Profile Desci Depth	ription: (Describe t Matrix	o the depth		ument th x Featur		itor or c	confirm the absence	ot indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-12	7.5YR 3/2	99	5YR 4/6	1	C	PL	Loamy/Clayey	Prominent redox concentrat	ions
									
								I	
								1	
-								1	
								· 1	
								l 1	
¹ Type: C=Co	ncentration, D=Depl	etion, RM=F	Reduced Matrix, C	S=Cove	red or C	oated S	and Grains. ² Loc	ation: PL=Pore Lining, M=Matrix	ζ.
Hydric Soil In	ndicators: (Applica	ble to all LF	RRs, unless othe	rwise n	oted.)		Indicato	rs for Problematic Hydric Soils	s ³ :
Histosol (A1)		Sandy Red	dox (S5)				n Muck (A9) (LRR C)	
Histic Epi	pedon (A2)		Stripped M	,	,		2 cm	n Muck (A10) (LRR B)	
Black His	tic (A3)		Loamy Mu					-Manganese Masses (F12) (LRR	D)
	Sulfide (A4)		Loamy Gle	-				uced Vertic (F18)	
	Layers (A5) (LRR C)	Depleted N	,	,			Parent Material (F21)	
	ck (A9) (LRR D)	(8.4.4)	Redox Dar					Shallow Dark Surface (F22)	
	Below Dark Surface	(A11)	Depleted [)	Othe	er (Explain in Remarks)	
	k Surface (A12)		Redox Dep	oression	s (F8)				
	ucky Mineral (S1) eyed Matrix (S4)	3Indicators	of hydrophytic y	ogotatio	n and wa	tland by	dralagy must be pres	ent, unless disturbed or problema	otic
	ayer (if observed):	malcators	3 of flydropflytic v	cgctatio	ii and we	I I	varology mast be pres	ent, unless disturbed or problem	alio.
Type:	ayer (ii observed):								
Depth (in	chee).		_ .				Hydric Soil Presen	t? Yes No	x
Remarks:			_				- Trydno Con T Tesen		
HYDROLO(ev.								
-	rology Indicators: ators (minimum of o	no is roquire	od: chock all that	annly)			Socondo	ary Indicators (minimum of two re	auirod)
-	Vater (A1)	ile is require	Salt Crust					er Marks (B1) (Riverine)	<u>quireu</u>)
	er Table (A2)		Biotic Crus					iment Deposits (B2) (Riverine)	
Saturation			Aquatic In		es (B13))		Deposits (B3) (Riverine)	
Water Ma	arks (B1) (Nonriveri	ne)	Hydrogen	Sulfide (Odor (C1)		nage Patterns (B10)	
Sediment	Deposits (B2) (Nor	riverine)	Oxidized F	Rhizosph	eres on l	Living R	oots (C3) Dry-	Season Water Table (C2)	
Drift Depo	osits (B3) (Nonriver	ine)	Presence	of Reduc	ced Iron ((C4)	Cray	fish Burrows (C8)	
	Soil Cracks (B6)		Recent Iro			lled Soil	` ' —	ration Visible on Aerial Imagery	(C9)
	n Visible on Aerial Ir	nagery (B7)						llow Aquitard (D3)	
Water-Sta	ained Leaves (B9)		Other (Exp	olain in R	lemarks)		FAC	-Neutral Test (D5)	
Field Observ									
Surface Wate		s		Depth (i	· -				
Water Table F				Depth (i	_		Wedlered Headers	D	- V
Saturation Pro		s	NoX	Depth (i	ncnes): _	-	Wetland Hydrolo	gy Present? Yes No	<u> </u>
(includes capi	orded Data (stream	nalide mon	itoring well seria	l nhotos	nrevious	s ineneo	tions) if available:		
DOSCING INCO	oraca Data (streatil	gaago, mon		, p.10103,	PICVIOUS	- mapec	acino,, ii avallable.		
Remarks:									

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/Cou	nty: Oroville/	Butte	Sampling Date:	10/19/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	3
Investigator(s): Dan Machek		Section, T	Township, Ra	nge: Section 01, T 19N	, R 03E	
Landform (hillside, terrace, etc.): hillside	L	ocal relief (co	oncave, conve	ex, none): concave	Slop	e (%):6_
Subregion (LRR): <u>LRR C</u> Lat: <u>39.5262655</u>			Long: <u>-1</u>	21.51574148	Datum:	NAD 83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percent	nt slopes			NWI classifi	cation: N/A	
Are climatic / hydrologic conditions on the site typical for	this time of	year?	Yes X	No (If no, exp	lain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No si	gnificantly di	sturbed? A	re "Normal C	ircumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No na	aturally probl	ematic? (I	f needed, exp	olain any answers in Ren	narks.)	
SUMMARY OF FINDINGS – Attach site map	showing	g sampling	g point lo	cations, transects,	important feat	ures, etc.
Hydric Soil Present? Yes No	X X X	I	Sampled Ar		No_X_	
Remarks:						
VEGETATION – Use scientific names of pla						
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	ksheet:	
1.	75 5515.	- Сросиоси		Number of Dominant S		
2.				Are OBL, FACW, or FA	•	0 (A)
3				Total Number of Domi	nant Species	
4		T-4-1 0		Across All Strata:		1(B)
Sapling/Shrub Stratum (Plot size:) 1	=	Total Cover		Percent of Dominant S Are OBL, FACW, or FA	•	0% (A/B)
2.		at a		Prevalence Index wo	rksheet:	
3.				Total % Cover of:	Multi	ply by:
4				OBL species0		0
5		 Total Cover		FACW species 0 FAC species 0		0
Herb Stratum (Plot size: 5' r)		Total Cover		FAC species 0 FACU species 12		48
Taeniatherum caput-medusae	70	Yes	UPL	UPL species 85		25
2. Centaurea solstitialis	10	No	UPL	Column Totals: 97	7 (A) 4	73 (B)
3. Erodium botrys	10	No	FACU	Prevalence Index =	= B/A =4.88	
4. Bromus hordeaceus	2	No	FACU			
5. <u>Convolvulus arvensis</u> 6.	5	<u>No</u>	UPL	Hydrophytic Vegetati Dominance Test is		
7.				Prevalence Index		
8.					aptations ¹ (Provide s	supporting
	97 =	Total Cover		data in Remark	s or on a separate s	sheet)
Woody Vine Stratum (Plot size:)				Problematic Hydro	phytic Vegetation ¹	(Explain)
1.				¹ Indicators of hydric so		
2		 Total Cover		be present, unless dist	urbed or problemat	IC.
% Bare Ground in Herb Stratum 3 % Co	ever of Biotic			Hydrophytic Vegetation Present? Yes	No X	
Remarks:	ACI OI DIOUG			. 1030111: 165_		_
i iveillains.						

SOIL Sampling Point: ____3

Depth	ription: (Describe t Matrix	to the depth		ument ti x Featur		itor or 0	confirm the absence	oi indicators.)	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	S
0-9	7.5YR 4/3	95	2.5YR 3/6	5	C		Loamy/Clayey	Prominent redox co	
-								-	
					-			<u></u>	
¹ Type: C=Co	ncentration, D=Depl	etion, RM=F	Reduced Matrix, C	S=Cove	ered or C	oated S	and Grains. ² Loca	ation: PL=Pore Lining, N	л=Matrix.
	ndicators: (Applica							rs for Problematic Hyd	
Histosol (A1)		Sandy Red	dox (S5)	·		1 cm	Muck (A9) (LRR C)	
Histic Epi	pedon (A2)		Stripped M					Muck (A10) (LRR B)	
Black His	tic (A3)		Loamy Mu	cky Mine	eral (F1)		Iron-	Manganese Masses (F1	2) (LRR D)
Hydrogen	Sulfide (A4)		Loamy Gle	eyed Mat	trix (F2)		Redu	uced Vertic (F18)	
Stratified	Layers (A5) (LRR C	;)	Depleted I	Matrix (F	3)		Red	Parent Material (F21)	
1 cm Mud	ck (A9) (LRR D)		Redox Dai	rk Surfac	e (F6)		Very	Shallow Dark Surface (I	F22)
Depleted	Below Dark Surface	e (A11)	Depleted [Dark Sur	face (F7))	Othe	r (Explain in Remarks)	
	k Surface (A12)		Redox De	pression	s (F8)				
	ucky Mineral (S1)	2							
Sandy GI	eyed Matrix (S4)	°Indicator	s of hydrophytic v	egetatio	n and we	tland hy	/drology must be prese	ent, unless disturbed or p	oroblematic.
Restrictive L	ayer (if observed):								
Type: _			_						
Depth (in	ches):		_				Hydric Soil Presen	t? Yes	No_X_
HYDROLO	GY								
Wetland Hyd	rology Indicators:								
Primary Indica	ators (minimum of o	ne is require	ed; check all that	apply)			<u>Seconda</u>	ry Indicators (minimum o	of two required)
Surface V	Vater (A1)		Salt Crust	(B11)			Wate	er Marks (B1) (Riverine)	
	er Table (A2)		Biotic Crus					ment Deposits (B2) (Riv	•
Saturation	` '		Aquatic In		, ,			Deposits (B3) (Riverine)
	arks (B1) (Nonriveri		— Hydrogen		•	•		nage Patterns (B10)	
	Deposits (B2) (Nor	•	— Oxidized F	•		•	` ' — '	Season Water Table (C2	2)
	osits (B3) (Nonriver Soil Cracks (B6)	ine)	Presence Recent Iro			` '		fish Burrows (C8) ration Visible on Aerial Iı	magary (C0)
	n Visible on Aerial Ir	madery (R7)				ileu Soi	` ' —	low Aquitard (D3)	nagery (C9)
	ained Leaves (B9)	nagory (Dr)	Other (Exp					-Neutral Test (D5)	
Field Observ	. ,				,			(-,	
Surface Wate		s	No X	Depth (i	nches):				
Water Table F				Depth (i	· -				
Saturation Pre				Depth (i	_		Wetland Hydrolo	gy Present? Yes	No X
(includes capi	illary fringe)				-				_
	orded Data (stream	gauge, mon	itoring well, aeria	l photos,	, previous	sinspec	ctions), if available:		
Remarks:									

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/Cou	nty: Oroville	/Butte	Sampling Date:	10/19/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	4
Investigator(s): Dan Machek		Section, 7	Γownship, Ra	ange: Section 01, T 19N	, R 03E	
Landform (hillside, terrace, etc.): terrace	l	_ocal relief (co	oncave, conv	rex, none): concave	Slope	e (%):1_
Subregion (LRR): <u>LRR C</u> Lat: <u>39.5252067</u>			Long: <u>-</u> 1	21.5751276	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 perce	nt slopes			NWI classifi	cation: N/A	
Are climatic / hydrologic conditions on the site typical for	this time of	year?	Yes X	No (If no, exp	lain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No si	ignificantly o	disturbed? A	re "Normal (Circumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No n				plain any answers in Ren		
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, transects,	important featu	ıres, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No			Sampled An a Wetland		No	
Remarks: Vernal pool 1						
VECETATION . Her exicutific names of pl						
VEGETATION – Use scientific names of pl	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test work	ksheet:	
1. 2.				Number of Dominant S Are OBL, FACW, or FA	•	2 (A)
3.			-	Total Number of Domir		,``
4				Across All Strata:	·	2 (B)
Sapling/Shrub Stratum (Plot size:) 1		=Total Cover		Percent of Dominant S Are OBL, FACW, or FA		0.0% (A/B)
2.				Prevalence Index wo	rksheet:	
3.				Total % Cover of:	Multir_	oly by:
4.				OBL species	x 1 =	
5				FACW species		
	=	=Total Cover		FAC species	x 3 =	
Herb Stratum (Plot size: 5' r)	25	V	ODI	FACU species	x 4 =	
Eleocharis palustris Polypogon monspeliensis	<u>35</u> 25	Yes Yes	OBL FACW	UPL species Column Totals:	x 5 =	(B)
Folypogon monspellensis Festuca perennis	10	No	FAC	Prevalence Index =		—— ^(D)
4. Leontodon saxatilis	5	No	FACU	1 Tevalence macx =		
5.				Hydrophytic Vegetation	on Indicators:	
6.				X Dominance Test is		
7.			-	Prevalence Index i	ıs ≤3.0 ¹	
8.					aptations¹ (Provide s	
	75 =	=Total Cover			s or on a separate s	,
Woody Vine Stratum (Plot size:)				Problematic Hydro	phytic Vegetation ¹ (Explain)
1. 2.				¹ Indicators of hydric so be present, unless dist		
		Total Cover		Hydrophytic Vegetation		
	over of Biotic	c Crust 15		Present? Yes_	No	
Remarks:						

SOIL Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-9	7.5YR 4/3	85	2.5YR 4/8	10	<u>C</u>	_PL_	Loamy/Clayey	Prominent redox concentrations
			5YR 5/8	5	C	M		Prominent redox concentrations
-					-		·	
-	·							·
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, C	S=Cove	ered or Co	oated Sa	and Grains. ² Loca	ation: PL=Pore Lining, M=Matrix.
-	ndicators: (Applica	ble to all L						s for Problematic Hydric Soils ³ :
Histosol (•		Sandy Red					Muck (A9) (LRR C)
	pedon (A2)		Stripped M	,	,			Muck (A10) (LRR B)
— Black His	` '		Loamy Mu					Manganese Masses (F12) (LRR D)
	Sulfide (A4)		Loamy Gle	-				ced Vertic (F18)
·	Layers (A5) (LRR C	;)	Depleted N					Parent Material (F21)
	ck (A9) (LRR D)	(8.4.4)	Redox Dar		` '			Shallow Dark Surface (F22)
	Below Dark Surface	e (A11)	Depleted D)	Other	r (Explain in Remarks)
	rk Surface (A12)		X Redox Dep	ression	s (F8)			
	ucky Mineral (S1)	31		4 . 4' .		Alamad law		and a contract of the contract
	eyed Matrix (S4)	Indicato	rs of hydrophytic v	egetatio	n and we	tiand ny	drology must be prese	ent, unless disturbed or problematic.
	ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Present	? Yes X No
Remarks:								
Refusal at 9 i	nches, gravel preser	nt						
LIVEROLO	0)/							
HYDROLO								
_	rology Indicators:							
-	ators (minimum of o	ne is requi	•					ry Indicators (minimum of two required)
	Vater (A1)		Salt Crust	` '				er Marks (B1) (Riverine)
	er Table (A2)		X Biotic Crus					ment Deposits (B2) (Riverine)
Saturatio	` '		Aquatic Inv					Deposits (B3) (Riverine)
	arks (B1) (Nonriveri		— Hydrogen		,	•		age Patterns (B10)
	Deposits (B2) (Nor		Oxidized R			-	· · · · · · · · · · · · · · · · · · ·	Season Water Table (C2)
	osits (B3) (Nonriver	ine)	Presence of					fish Burrows (C8)
	Soil Cracks (B6) n Visible on Aerial Ir	magery (R7	Recent Iro Thin Muck			ileu Soii	· · · · · · · · · · · · · · · · · · ·	ration Visible on Aerial Imagery (C9) ow Aquitard (D3)
	ained Leaves (B9)	nagery (b/	Other (Exp					Neutral Test (D5)
_			Other (EXP	idiii iii i	terriarite)		1	rtediai rest (Bo)
Field Observ Surface Wate		.0	No. V	Donth (i	nohoo):			
Water Table I				Depth (i Depth (i	_			
Saturation Pro				Depth (i	_		Wetland Hydrolog	gy Present? Yes X No
(includes cap			<u> </u>	Dopui (i	_	-	Trottana riyarolog	<u> </u>
	orded Data (stream	gauge, mg	nitoring well. aerial	photos	previous	s inspec	tions), if available:	
		Jge, 1110			,		,,	
Remarks:								
Google Earth								
	aerial imagery from	2/2021 sh	ows inundation of a	iquatic f	eature.			
g	aerial imagery from	2/2021 sh	ows inundation of a	quatic f	eature.			

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/Cou	nty: Oroville	/Butte	Sampling Date:	10/19/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	5
Investigator(s): Dan Machek		Section,	Township, Ra	inge: Section 01, T 19N	, R 03E	
Landform (hillside, terrace, etc.): terrace		Local relief (co	oncave, conv	ex, none): concave	Slop	e (%):2
Subregion (LRR): LRR C Lat: 39.5251721			Long: <u>-</u> 1	21.5750972	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 perce	nt slopes			NWI classifi	cation: N/A	
Are climatic / hydrologic conditions on the site typical for	r this time of	f year?	Yes X	No (If no, exp	lain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No s	ignificantly o	disturbed? A	Are "Normal C	Circumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No n	aturally prol	olematic? (If needed, ex	plain any answers in Ren	narks.)	
SUMMARY OF FINDINGS – Attach site ma			g point lo	cations, transects,	important feat	ures, etc.
Hydric Soil Present? Yes No	X X X	l l	e Sampled A n a Wetland		No_X_	
Remarks:						
VEGETATION – Use scientific names of pl		Daminant	lu dia atau			
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	ksheet:	
1				Number of Dominant S	Species That	
2				Are OBL, FACW, or FA	4C:	0 (A)
3.				Total Number of Domin	•	2 (D)
4		Total Cover		Across All Strata:		3 (B)
Sapling/Shrub Stratum (Plot size:) 1		- rotal Gover		Percent of Dominant S Are OBL, FACW, or FA	•	0% (A/B)
2.				Prevalence Index wo	rksheet:	
3.				Total % Cover of:	Multip	oly by:
4				OBL species 0	x 1 =	0
5		T-1-1-0		FACW species 0		0
Herb Stratum (Plot size: 5' r)		=Total Cover		FAC species 0 FACU species 55		<u>0</u> 20
Taeniatherum caput-medusae	25	Yes	UPL	UPL species 35		75
2. Leontodon saxatilis	25	Yes	FACU	Column Totals: 90		95 (B)
3. Erodium botrys	25	Yes	FACU	Prevalence Index =	B/A = 4.39	
4. Briza maxima	10	No	UPL			
5. Bromus hordeaceus	5	No	<u>FACU</u>	Hydrophytic Vegetation		
6. 7.		-		Dominance Test is Prevalence Index i		
8.					is ≤3.0 aptations¹ (Provide s	supporting
	90	=Total Cover			s or on a separate s	
Woody Vine Stratum (Plot size:)				Problematic Hydro	phytic Vegetation ¹	(Explain)
1				¹ Indicators of hydric so be present, unless dist		
		=Total Cover		Hydrophytic		
% Bare Ground in Herb Stratum10 % C	over of Bioti	c Crust		Vegetation Present? Yes	NoX	-
Remarks:						

SOIL Sampling Point: 5

Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹ Lo	c ² Texture	Remarks
0-12 5YR 3/4 100		Loamy/Clayey	gravel present
			-
¹ Type: C=Concentration, D=Depletion, RM=F	Reduced Matrix, CS=Covered or Coate	d Sand Grains.	tion: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all LF			s for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	1 cm	Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		Manganese Masses (F12) (LRR D)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		ced Vertic (F18)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)		Parent Material (F21)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		Shallow Dark Surface (F22)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		(Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1)			
Sandy Gleyed Matrix (S4) ³ Indicators	s of hydrophytic vegetation and wetland	d hydrology must be prese	nt, unless disturbed or problematic.
Restrictive Layer (if observed):			
Type:			
Depth (inches):	_	Hydric Soil Present	? Yes No_X
HYDROLOGY			
HYDROLOGY Wetland Hydrology Indicators:			
	d; check all that apply)	Secondar	y Indicators (minimum of two required)
Wetland Hydrology Indicators:	d; check all that apply)Salt Crust (B11)		y Indicators (minimum of two required) r Marks (B1) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required)	• • • • • • • • • • • • • • • • • • • •	Wate	•
Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1)	Salt Crust (B11)	WateSedir	r Marks (B1) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	Salt Crust (B11) Biotic Crust (B12)	Wate Sedir Drift [r Marks (B1) (Riverine) nent Deposits (B2) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13)	Wate Sedir Drift [r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4)	Wate Sedir Drift I Drain Dry-S Crayf	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	Wate Sedir Drift [Drain Pry-S Crayf Soils (C6) Satur	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)	Wate Sedir	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled	Wate Sedir	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required and surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations:	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7)	Wate Sedir	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches):	Wate Sedir	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) ish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Livine Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Wate Sedir Print Prain Print Prain Prain	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Livin Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches):	Wate Sedir	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Wate Sedir Sedir Drift I Drain Dry-S Crayf Soils (C6) Satur Shalle FAC-	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Wate Sedir Sedir Drift I Drain Dry-S Crayf Soils (C6) Satur Shalle FAC-	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe)	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Wate Sedir Sedir Drift I Drain Dry-S Crayf Soils (C6) Satur Shalle FAC-	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)
Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) (Nonriverine) Sediment Deposits (B2) (Nonriverine) Drift Deposits (B3) (Nonriverine) Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes Water Table Present? Yes Saturation Present? Yes (includes capillary fringe) Describe Recorded Data (stream gauge, mone	Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks) No X Depth (inches): No X Depth (inches):	Wate Sedir Sedir Drift I Drain Dry-S Crayf Soils (C6) Satur Shalle FAC-	r Marks (B1) (Riverine) nent Deposits (B2) (Riverine) Deposits (B3) (Riverine) age Patterns (B10) eason Water Table (C2) sish Burrows (C8) ation Visible on Aerial Imagery (C9) ow Aquitard (D3) Neutral Test (D5)

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/Cour	nty: Oroville/	Butte	Sampling Date:	10/19/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	6
Investigator(s): Dan Machek		Section, T	ownship, Rai	nge: Section 01, T 19N,	R 03E	
Landform (hillside, terrace, etc.): terrace	Lo	ocal relief (co	oncave, conve	ex, none): concave	Slop	e (%):1_
Subregion (LRR): <u>LRR C</u> Lat: <u>39.5243915</u>			Long: <u>-1</u>	21.5752024	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percent	t slopes			NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the site typical for t	this time of y	year? `	Yes X	No (If no, expl	ain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No sig	nificantly di	sturbed? A	re "Normal C	ircumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No na	turally probl	ematic? (I	f needed, exp	olain any answers in Rem	uarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	g sampling	g point loc	ations, transects, i	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes X No	X		Sampled Ar		No_X_	
Remarks:		•				
VEGETATION – Use scientific names of pla		Densin	In dia stan. I			
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	sheet:	
1.				Number of Dominant S	pecies That	
2				Are OBL, FACW, or FA	.C:	1(A)
3				Total Number of Domin	•	4 (5)
4		Total Cover		Across All Strata:		1 (B)
Sapling/Shrub Stratum (Plot size:) 1.		Total Cover		Percent of Dominant Spare OBL, FACW, or FA	•	0.0% (A/B)
1				Prevalence Index wor	ksheet:	
3.				Total % Cover of:	Multip	oly by:
4				OBL species 0	x 1 =	0
5				FACW species 5		10
– Herb Stratum (Plot size: 5' r)	=	Total Cover		FAC species 75 FACU species 0		25 0
1. Festuca perennis	60	Yes	FAC	UPL species 0		0
2. Rumex crispus	10	No	FAC	Column Totals: 80		35 (B)
3. Carex sp.	5	No	FAC	Prevalence Index =	B/A = 2.94	
4. Juncus effusus	5	No	FACW			
5				Hydrophytic Vegetation		
6.				X Dominance Test is Prevalence Index is		
7. 8.				Morphological Ada		supporting
	80 =	Total Cover			or on a separate s	
Woody Vine Stratum (Plot size:)				Problematic Hydro	phytic Vegetation ¹	(Explain)
1				¹ Indicators of hydric soi		
2		Tatal O:		be present, unless distu	urbed or problemati	C.
- % Bare Ground in Herb Stratum 20 % Cov	er of Biotic	Total Cover Crust		Hydrophytic Vegetation Present? Yes	X No	
Remarks:		· · ·				

SOIL Sampling Point: 6

Depth inches) Co	Matrix olor (moist)	<u></u> %	Redo Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
	10YR 3/2	97	5YR 4/6	3	C		Loamy/Clayey	Promin	ent redox conce	ntrations
							-	_		
							-	_		
					-			-0 :		
								_		
							ę			
								_		
Type: C=Concentr	ation, D=Depl	etion, RM=F	Reduced Matrix, C	CS=Cove	ered or Co	oated Sa	and Grains. ² Lo	cation: PL=P	ore Lining, M=N	1atrix.
lydric Soil Indicat	ors: (Applica	ble to all LI	RRs, unless othe	erwise n	oted.)		Indicat	ors for Probl	ematic Hydric	Soils ³ :
Histosol (A1)			Sandy Red	dox (S5)			1 c	m Muck (A9)	(LRR C)	
Histic Epipedon	(A2)		Stripped M	1atrix (S6	3)		2 c	m Muck (A10) (LRR B)	
Black Histic (A3	3)		Loamy Mu	icky Mine	eral (F1)		Iro	n-Manganese	Masses (F12) (LRR D)
Hydrogen Sulfid	de (A4)		Loamy Gle	eyed Mat	trix (F2)		Re	duced Vertic ((F18)	
Stratified Layers	s (A5) (LRR C)	Depleted I	Matrix (F	3)		Re	d Parent Mate	erial (F21)	
1 cm Muck (A9)	(LRR D)		Redox Da	rk Surfac	e (F6)		Ve	ry Shallow Da	rk Surface (F22)
Depleted Below	Dark Surface	(A11)	Depleted [Dark Sur	face (F7)		Otl	ner (Explain in	Remarks)	
Thick Dark Surf	ace (A12)		Redox De	pression	s (F8)					
— Sandy Mucky M	lineral (S1)									
Sandy Gleyed N	Matrix (S4)	³ Indicator	s of hydrophytic v	egetatio	n and we	tland hy	drology must be pre	sent, unless o	disturbed or prol	olematic.
estrictive Layer (i	if observed):									
Type:										
Depth (inches):			<u> </u>				Hydric Soil Prese	ent?	Yes	No
							Hydric Soil Prese	ent?	Yes	No _ >
Depth (inches): Remarks:							Hydric Soil Prese	ent?	Yes	No _>
Depth (inches): Remarks: YDROLOGY							Hydric Soil Prese	ent?	Yes	No_X
Depth (inches): Remarks: YDROLOGY Vetland Hydrology	y Indicators:	ne is require	≟d; check all that	apply)			•		Yes	
Depth (inches): Remarks: YDROLOGY Vetland Hydrology	y Indicators: minimum of o	ne is require	ed; check all that a				Second		s (minimum of to	
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches):	y Indicators: minimum of or (A1)	ne is require	•	(B11)			Second	dary Indicators ater Marks (B1	s (minimum of to	vo require
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches)	y Indicators: minimum of or (A1) ole (A2)	ne is require	Salt Crust	(B11) st (B12)	tes (B13)			dary Indicators ater Marks (B1	s (minimum of to l) (Riverine) sits (B2) (Riveri	vo require
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches):	y Indicators: minimum of or (A1) ole (A2)	•	Salt Crust Biotic Crus	(B11) st (B12) vertebra	,			dary Indicators ater Marks (B1 diment Depos	s (minimum of to 1) (Riverine) iits (B2) (Riverine) 3) (Riverine)	vo require
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches):	y Indicators: minimum of or (A1) ole (A2)	ne)	Salt Crust Biotic Crust Aquatic In	(B11) st (B12) vertebrat Sulfide (Odor (C1))		dary Indicators ater Marks (B1 diment Depos ft Deposits (B	s (minimum of to l) (Riverine) its (B2) (Riverine) 3) (Riverine) ns (B10)	vo require
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches): High Water Tabe Saturation (A3) Water Marks (B	y Indicators: minimum of or (A1) ble (A2) (1) (Nonrivering sits (B2) (Nonrivering	ne) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen	(B11) st (B12) vertebrat Sulfide (Rhizosph	Odor (C1) eres on l) ₋iving R		dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr	s (minimum of to l) (Riverine) iits (B2) (Riverine) as (B10) er Table (C2)	vo require
Primary Indicators (Inches): Surface Water (Inches): Surface Water (Inches): High Water Tabe Saturation (A3) Water Marks (B) Sediment Depo	y Indicators: minimum of or (A1) ple (A2) (1) (Nonrivering sits (B2) (Nonrivering (B3) (Nonrivering)	ne) nriverine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F	(B11) st (B12) vertebrat Sulfide (Rhizosph of Reduc	Odor (C1) eres on loced Iron () ₋iving R∈ C4)	Second Wa Se Dri X Dri Dri Cri Cri Cri	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows	s (minimum of to l) (Riverine) iits (B2) (Riverine) as (B10) er Table (C2)	vo require
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches): High Water Table Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (E)	y Indicators: minimum of or (A1) ble (A2) (I1) (Nonriverir sits (B2) (Nonriverir acks (B6)	ne) nriverine) ine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	(B11) st (B12) vertebrate Sulfide (Rhizosph of Reduct n Reduct	Odor (C1) eres on l ced Iron (ction in Ti) ₋iving R∈ C4)	Second Wa Se Dri X Dra poots (C3) Cra s (C6) Sa	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows	s (minimum of to l) (Riverine) its (B2) (Riverine) as (B10) er Table (C2) s (C8) e on Aerial Imag	vo requir
Depth (inches): Pemarks: POROLOGY Vetland Hydrology rimary Indicators (inches): Surface Water (inches): High Water Table Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (E) Surface Soil Cra	y Indicators: minimum of or (A1) ble (A2) c1) (Nonrivering sits (B2) (Non cacks (B6) ble on Aerial Ir	ne) nriverine) ine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	(B11) st (B12) vertebrate Sulfide (Rhizosph of Reduct on Reduct Surface	Odor (C1) peres on I ped Iron (petion in Ti pet (C7)) ₋iving R∈ C4)	Second Wa Se Dri X Dra poots (C3) Dra Cra s (C6) Sa Sh	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl	s (minimum of to l) (Riverine) sits (B2) (Riverine) as (B10) ter Table (C2) s (C8) e on Aerial Imag	vo requir
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches): High Water Tabe Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (E) Surface Soil Crae Inundation Visibe Water-Stained I	y Indicators: minimum of or (A1) ble (A2) (1) (Nonrivering sits (B2) (Non (B3) (Nonrivering acks (B6) ble on Aerial In Leaves (B9)	ne) nriverine) ine)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck	(B11) st (B12) vertebrate Sulfide (Rhizosph of Reduct on Reduct Surface	Odor (C1) peres on I ped Iron (petion in Ti pet (C7)) ₋iving R∈ C4)	Second Wa Se Dri X Dra poots (C3) Dra Cra s (C6) Sa Sh	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro	s (minimum of to l) (Riverine) sits (B2) (Riverine) as (B10) ter Table (C2) s (C8) e on Aerial Imag	vo requir
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches): High Water Tabe Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (E) Surface Soil Crail Inundation Visibe Water-Stained Incided Observations	y Indicators: minimum of or (A1) ble (A2) sits (B2) (Non 33) (Nonriveriacks (B6) ble on Aerial In Leaves (B9)	ne) iriverine) ine) magery (B7)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck	(B11) st (B12) vertebrate Sulfide (Rhizosph of Reduct on Reduct Surface	Odor (C1) peres on I ped Iron (petion in Ti petion (C7) Remarks)) ₋iving R∈ C4)	Second Wa Se Dri X Dra poots (C3) Dra Cra s (C6) Sa Sh	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro	s (minimum of to l) (Riverine) sits (B2) (Riverine) as (B10) ter Table (C2) s (C8) e on Aerial Imag	vo requir
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (included and included	y Indicators: minimum of or (A1) ble (A2) (I) (Nonriverial) sits (B2) (Nonriverial) acks (B6) ble on Aerial In Leaves (B9) s: ent? Yes	ne) iriverine) ine) magery (B7)	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrat Sulfide (Rhizosph of Reduc on Reduc s Surface blain in R	Odor (C1) leres on leted Iron (ction in Tieleto) Remarks)) ₋iving R∈ C4)	Second Wa Se Dri X Dra poots (C3) Dra Cra s (C6) Sa Sh	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro	s (minimum of to l) (Riverine) sits (B2) (Riverine) as (B10) ter Table (C2) s (C8) e on Aerial Imag	vo requir
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches): High Water Tabe Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (E) Surface Soil Crae Inundation Visite	y Indicators: minimum of or (A1) ble (A2) c1) (Nonrivering sits (B2) (Nonrivering acks (B6) ble on Aerial In Leaves (B9) s: ent? Yes	ne) nriverine) ine) magery (B7) ss	Salt Crust Biotic Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrat Sulfide (Rhizosph of Reduc on Reduc Surface blain in R	Odor (C1) leres on I ced Iron (ction in Ti e (C7) Remarks) nches): nches):) ₋iving R∈ C4)	Second Wa Se Dri X Dra poots (C3) Dra Cra s (C6) Sa Sh	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro C-Neutral Tes	s (minimum of to l) (Riverine) sits (B2) (Riverine) ns (B10) ter Table (C2) s (C8) e on Aerial Imag d (D3) st (D5)	vo requir
Depth (inches): Remarks: POROLOGY Vetland Hydrology Primary Indicators (including Mater Table Saturation (A3) Water Marks (Boundation Visible Water-Stained Including Visible Water Presentaturation Present?	y Indicators: minimum of or (A1) ble (A2) c1) (Nonriverialists (B2) (Nonriverialists (B6) cle on Aerial In Leaves (B9) c: ent? Yes yes	ne) nriverine) ine) magery (B7) ss	Salt Crust Biotic Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebrat Sulfide (Rhizosph of Reduc on Reduc c Surface blain in R Depth (i Depth (i	Odor (C1) leres on Led Iron (ction in Tie (C7) Remarks) Inches):) ₋iving R∈ C4)	Second Wa Se Dri X Dra Cra s (C6) Sa X FA	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro C-Neutral Tes	s (minimum of to l) (Riverine) sits (B2) (Riverine) ns (B10) ter Table (C2) s (C8) e on Aerial Imag d (D3) st (D5)	vo requir
Depth (inches): Remarks: YDROLOGY Vetland Hydrology Primary Indicators (inches): Surface Water (inches): High Water Table Saturation (A3) Water Marks (B) Sediment Depo Drift Deposits (E) Surface Soil Cray Inundation Visible Water-Stained Inches Surface Water Presentations Vater Table Presentations	y Indicators: minimum of or (A1) ble (A2) (1) (Nonrivering the sits (B2) (Nonrivering the sits (B6)) ble on Aerial Interest (B9) s: ent? Yester (B9) ringe)	ne) nriverine) ine) magery (B7) ss ss	Salt Crust Biotic Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebral Sulfide (Rhizosph of Reduct on Reduct s Surface blain in R Depth (i Depth (i	Odor (C1) eres on L ced Iron (ction in Ti e (C7) Remarks) nches): nches):	Living Ro	Second Wa	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro C-Neutral Tes	s (minimum of to l) (Riverine) sits (B2) (Riverine) ns (B10) ter Table (C2) s (C8) e on Aerial Imag d (D3) st (D5)	vo requir
Depth (inches): emarks: YDROLOGY /etland Hydrology rimary Indicators (i Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depo Drift Deposits (E Surface Soil Cra Inundation Visib Water-Stained I ield Observations urface Water Prese /ater Table Present aturation Present? ncludes capillary fr	y Indicators: minimum of or (A1) ble (A2) (1) (Nonrivering the sits (B2) (Nonrivering the sits (B6)) ble on Aerial Interest (B9) s: ent? Yester (B9) ringe)	ne) nriverine) ine) magery (B7) ss ss	Salt Crust Biotic Crust Aquatic In: Hydrogen Oxidized F Presence Recent Iro Thin Muck Other (Exp	(B11) st (B12) vertebral Sulfide (Rhizosph of Reduct on Reduct s Surface blain in R Depth (i Depth (i	Odor (C1) eres on L ced Iron (ction in Ti e (C7) Remarks) nches): nches):	Living Ro	Second Wa	dary Indicators ater Marks (B1 diment Depos ft Deposits (B ainage Patterr y-Season Wat ayfish Burrows turation Visibl allow Aquitaro C-Neutral Tes	s (minimum of to l) (Riverine) sits (B2) (Riverine) ns (B10) ter Table (C2) s (C8) e on Aerial Imag d (D3) st (D5)	vo requir

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/County: Oroville	e/Butte	Sampling Date: <u>11/08/2023</u>
Applicant/Owner: Dean Kassenbaum			State: CA	Sampling Point: 7
Investigator(s): Dan Machek		Section, Township, R	ange: Section 01, T 19N,	R 03E
Landform (hillside, terrace, etc.): terrace	Loca	I relief (concave, con	vex, none): concave	Slope (%):1_
Subregion (LRR): LRR C Lat: 39.5242424		Long:	121.5756751	Datum: NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percei	nt slopes		NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for	this time of yea	r? Yes X	No (If no, expl	ain in Remarks.)
Are Vegetation No , Soil No , or Hydrology No si	gnificantly distu	bed? Are "Normal	Circumstances" present?	Yes X No
Are Vegetation No , Soil No , or Hydrology No na	aturally problema	atic? (If needed, ex	xplain any answers in Rem	arks.)
SUMMARY OF FINDINGS – Attach site map	showing s	ampling point lo	cations, transects, i	mportant features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No		Is the Sampled A		No
Remarks: Seasonal wetland 1				
VEGETATION – Use scientific names of pla	ants.			
Trac Stratum (Diet size)		minant Indicator	Dominanas Taat wark	rahaati
Tree Stratum (Plot size:) 1.	% Cover Sp	ecies? Status	Dominance Test work Number of Dominant S	
2.			Are OBL, FACW, or FA	•
3.			Total Number of Domin	•
4		-1.0	Across All Strata:	1(B)
Sapling/Shrub Stratum (Plot size:) 1		al Cover	Percent of Dominant Space Are OBL, FACW, or FA	•
2.			Prevalence Index wor	ksheet:
3.			Total % Cover of:	Multiply by:
4			OBL species 0	
5		al Cover	FACW species 50 FAC species 10	
Herb Stratum (Plot size: 5' r)		ai Covei	FACU species 0	
1. Polypogon monspeliensis	50	Yes FACW	UPL species 0	x 5 = 0
2. Festuca perennis	10	No FAC	Column Totals: 60	
3			Prevalence Index =	B/A = 2.17
4 ·			Hydrophytic Vegetation	
6.			X Dominance Test is	
7.			X Prevalence Index is	
8.			l —	ptations ¹ (Provide supporting
		al Cover		or on a separate sheet)
Woody Vine Stratum (Plot size:)				phytic Vegetation ¹ (Explain)
1	-		Indicators of hydric soin be present, unless disturbed.	il and wetland hydrology must urbed or problematic.
	=Tota	al Cover	Hydrophytic	,
			Vegetation	
	over of Biotic Cru	ust <u>20</u>	Present? Yes _	No
Remarks:				

SOIL Sampling Point: _____7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redo	x Featur	es			
(inches)	Color (moist)	%	Color (moist)	%_	Type ¹	Loc ²	Texture	Remarks
0-4	7.5YR 4/3	100					Loamy/Clayey	
4-9	7.5YR 4/3	92	5YR 4/6	7	С	М	Loamy/Clayey	Prominent redox concentrations
			N 2.5/	1				Prominent redox concentrations
				<u> </u>				
					-			
								-
¹ Type: C=Co	ncentration, D=Dep	etion RM=F	Reduced Matrix C	S=Cove	ered or C	nated Sa	and Grains ² I o	cation: PL=Pore Lining, M=Matrix.
	ndicators: (Applica					oated of		ors for Problematic Hydric Soils ³ :
Histosol		Die to all Li	Sandy Red					m Muck (A9) (LRR C)
	ipedon (A2)		Stripped M					m Muck (A10) (LRR B)
					•			
Black His	n Sulfide (A4)		Loamy Mu Loamy Gle					n-Manganese Masses (F12) (LRR D) duced Vertic (F18)
		• • • • • • • • • • • • • • • • • • • •		-				
	Layers (A5) (LRR C	•)	Depleted N					d Parent Material (F21)
	ck (A9) (LRR D)	. (Δ14)	Redox Dar		` '	١		y Shallow Dark Surface (F22)
	Below Dark Surface	e (A11)	Depleted D)	Oth	er (Explain in Remarks)
	rk Surface (A12)		X Redox Dep	ression	S (F8)			
	ucky Mineral (S1)	3, ,, ,	61 1 1 1					
Sandy G	eyed Matrix (S4)	Indicator	s of hydrophytic v	egetatio	n and we	etland hy	drology must be pres	sent, unless disturbed or problematic.
Restrictive L	.ayer (if observed):							
Type: _								
Depth (in	ches):						Hydric Soil Prese	nt? Yes X No
Remarks:								
N 2.5/ = Gley	2 2.5/10B mangane	ese concenti	ations. Large amo	ounts of	gravel pi	resent.		
HYDROLO	GY							
Wetland Hyd	Irology Indicators:							
_	ators (minimum of o	ne is require	ad: check all that a	annly)			Second	ary Indicators (minimum of two required)
-	Water (A1)	nc is require	Salt Crust					ter Marks (B1) (Riverine)
	ter Table (A2)		X Biotic Crus	` '				diment Deposits (B2) (Riverine)
Saturatio			Aquatic Inv		toc (R13)	١		t Deposits (B3) (Riverine)
	arks (B1) (Nonriveri	no)	Hydrogen		` '			inage Patterns (B10)
	t Deposits (B2) (No		Oxidized R					-Season Water Table (C2)
	osits (B3) (Nonriver		Presence of			-	` ' — '	yfish Burrows (C8)
	Soil Cracks (B6)	1110)	Recent Iro			` '		uration Visible on Aerial Imagery (C9)
	n Visible on Aerial I	madery (R7)				ilica coli	` ′ —	allow Aquitard (D3)
	ained Leaves (B9)	magery (br)	Other (Exp					C-Neutral Test (D5)
	. ,		Other (Exp	idiii iii i	torriarito)	'	<u> </u>	5 (140 data 100 (150)
Field Observ			N. V	D 41- /:				
Surface Water				Depth (i	_			
Water Table				Depth (i	· -		Wotland Hede-1	ngy Propont2 Ves V Ne
Saturation Pr		·>	NoX	Depth (i	nches): _		Wetland Hydrol	ogy Present? Yes X No
(includes cap	iliary fringe) orded Data (stream	dalido mos	nitoring well seriel	nhotoc	nrovious	e inenee	tions) if available:	
Describe Rec	orueu Data (Stream	gauge, mor	mornig well, aerial	priotos	, previous	s irispec	uons), ii avallable:	
Remarks:								

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

Project/Site: Table Mountain RV Resort		City/Cou	nty: Oroville/	Butte	Sampling Date:	11/08/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	8
Investigator(s): Dan Machek		Section, T	ownship, Ra	nge: Section 01, T 19N,	R 03E	
Landform (hillside, terrace, etc.): terrace	L	ocal relief (co	oncave, conve	ex, none): concave	Slop	e (%):1_
Subregion (LRR): LRR C Lat: 39.5242745			Long: <u>-1</u>	21.5757068	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percent	t slopes			NWI classific	cation: N/A	
Are climatic / hydrologic conditions on the site typical for	this time of	year?	Yes X	No (If no, expl	ain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No sig	gnificantly d	isturbed? A	re "Normal C	ircumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No na	turally prob	lematic? (I	f needed, exp	olain any answers in Rem	ıarks.)	
SUMMARY OF FINDINGS – Attach site map	showing	g samplin	g point lo	cations, transects, i	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes No			Sampled Ar		No_X_	
Remarks:						
VECETATION Has a significant and a finis	4-					
VEGETATION – Use scientific names of pla	Absolute	Dominant	Indicator I			
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Dominance Test work	sheet:	
1				Number of Dominant S	•	
2				Are OBL, FACW, or FA		2 (A)
3. 4.				Total Number of Domin Across All Strata:	•	2 (B)
		Total Cover		Percent of Dominant S		<u> </u>
Sapling/Shrub Stratum (Plot size:)				Are OBL, FACW, or FA	•	0.0% (A/B)
1						
2. 3.				Prevalence Index wor Total % Cover of:		oly by:
				OBL species 0		0
5.				FACW species 0		0
	=	Total Cover		FAC species 96	x 3 = 2	88
Herb Stratum (Plot size: 5' r)				FACU species0		0
1. Festuca perennis	50	Yes	FAC	UPL species 0		0 (7)
Hordeum marinum Rumex crispus	<u>45</u> 1	Yes No	FAC FAC	Column Totals: 96 Prevalence Index =	\'	88 (B)
		110		Frevalence index =	B/A = 3.00	
5.				Hydrophytic Vegetation	on Indicators:	
6.				X Dominance Test is		
7.				Prevalence Index is		
8				Morphological Ada		
	96 =	Total Cover			or on a separate s	,
Woody Vine Stratum (Plot size:) 1.				Problematic Hydro		
2.				¹ Indicators of hydric soi be present, unless distu		
	=	Total Cover				-
_				Hydrophytic Vegetation		
% Bare Ground in Herb Stratum 4 % Co	ver of Biotic	Crust	<u> </u>	Present? Yes _	No	
Remarks:						

SOIL Sampling Point: 8

Profile Desc Depth	rofile Description: (Describe to the depth needed to documer epth Matrix Redox Fea					ator or o	confirm the	e absence of indicators.)			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure		Remarks	
0-4	7.5YR 4/3	100	20.0. (.110.01)		71		· OAL		3	tomanto	<u> </u>
	7.5YR 4/3	93	5YR 4/6	7			Loome	Clavey		redox conce	ntrations
4-9	7.5YR 4/3		5YR 4/6	7	<u> </u>	PL	Loamy/0	Jiayey	Prominent	redox conce	ntrations
									r		
									1		
			_								
	ncentration, D=Dep					oated S	and Grains.		ation: PL=Pore		
-	ndicators: (Applica	ble to all L			•				rs for Problem	-	Soils ³ :
Histosol			Sandy Red						Muck (A9) (LF		
	ipedon (A2)		Stripped M	,	,				Muck (A10) (L	•	
Black His			Loamy Mu						Manganese Ma		LRR D)
Hydroger	n Sulfide (A4)		Loamy Gle						uced Vertic (F1	-	
Stratified	Layers (A5) (LRR C	;)	Depleted N						Parent Materia	` '	
1 cm Mu	ck (A9) (LRR D)		Redox Dar		. ,				Shallow Dark)
Depleted	Below Dark Surface	e (A11)	Depleted [• •)		Othe	r (Explain in Re	emarks)	
	rk Surface (A12)		X Redox Dep	pression	s (F8)						
	ucky Mineral (S1)										
Sandy Gl	eyed Matrix (S4)	³ Indicator	s of hydrophytic v	egetatio	n and we	etland hy	ydrology mus	t be prese	ent, unless dist	urbed or prob	lematic.
Restrictive L	ayer (if observed):										
Type:											
Depth (in	ches):						Hydric So	il Present	t?	Yes X	No
HYDROLO	GY										
Wetland Hyd	Irology Indicators:										
Primary Indic	ators (minimum of o	ne is require	ed; check all that a	apply)				Secondar	ry Indicators (n	ninimum of tw	o required)
Surface \	Water (A1)		Salt Crust					Wate	er Marks (B1) (Riverine)	
High Wat	ter Table (A2)		Biotic Crus	st (B12)				Sedir	ment Deposits	(B2) (Riverin	ie)
Saturatio	n (A3)		Aquatic Inv		, ,				Deposits (B3)	•	
	arks (B1) (Nonriveri		Hydrogen		`	,			nage Patterns (
	t Deposits (B2) (Nor	-	Oxidized F			-	toots (C3)		Season Water		
	osits (B3) (Nonriver	ine)	Presence			` '			fish Burrows (C	-	
	Soil Cracks (B6)		Recent Iro			illed Soi	ls (C6)		ration Visible o	-	ery (C9)
	n Visible on Aerial I	magery (B7)							low Aquitard (C	-	
Water-St	ained Leaves (B9)		Other (Exp	lain in R	Remarks)			FAC-	-Neutral Test (I	D5)	
Field Observ											
Surface Water		s			nches): _						
Water Table				Depth (i	_						
Saturation Pr		es	No X	Depth (i	nches): _		Wetland	l Hydrolog	gy Present?	Yes	No X
(includes cap	<u> </u>										
Describe Rec	orded Data (stream	gauge, mor	nitoring well, aeria	photos,	, previou	s inspec	ctions), if ava	ııable:			
Remarks:											

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Table Mountain RV Resort		City/Cou	nty: Oroville	e/Butte	Sampling Date:	11/08/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	9
Investigator(s): Dan Machek		Section, 7	Γownship, R	ange: Section 01, T 19N,	, R 03E	
Landform (hillside, terrace, etc.): terrace		Local relief (co	oncave, con	vex, none): concave	Slop	e (%):2
Subregion (LRR): <u>LRR C</u> Lat: <u>39.5251708</u>	3		Long:	121.5778540	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 per	cent slopes			NWI classific	cation: N/A	
Are climatic / hydrologic conditions on the site typical	for this time of	f year?	Yes X	No (If no, expl	lain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No	significantly	disturbed? A	re "Normal	Circumstances" present?	Yes X No	' <u> </u>
Are Vegetation No , Soil No , or Hydrology No	naturally prob	olematic? (f needed, ex	xplain any answers in Rem	narks.)	
SUMMARY OF FINDINGS – Attach site m	ap showin	g samplin	g point lo	ocations, transects,	important feat	ures, etc.
Hydric Soil Present? Yes X	lo lo	I	Sampled A		No	
Remarks: Seasonal wetland swale 2		'				
VEGETATION – Use scientific names of						
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test work	(sheet:	
1.				Number of Dominant S	pecies That	
2				Are OBL, FACW, or FA	\ C:	1 (A)
3.	· ——			Total Number of Domir Across All Strata:	•	1 (B)
*·		Total Cover		Percent of Dominant S		<u> </u>
Sapling/Shrub Stratum (Plot size:				Are OBL, FACW, or FA	•	0.0% (A/B)
1.						*
2.	· ——			Prevalence Index wor		
3				Total % Cover of: OBL species 2		ply by: 2
5.				FACW species 0		0
	· —	Total Cover	-	FAC species 85		255
Herb Stratum (Plot size: 5' r)				FACU species 2	x 4 =	8
Festuca perennis	80	Yes	FAC	UPL species0		0
2. Hordeum marinum	5	No No	FAC	Column Totals: 89	` /	.65 (B)
Lythrum hyssopifolium Erodium botrys	2	No No	OBL FACU	Prevalence Index =	= B/A = <u>2.98</u>	
5			17100	Hydrophytic Vegetation	on Indicators:	
6.				X Dominance Test is		
7.				X Prevalence Index is	s ≤3.0 ¹	
8				Morphological Ada		
	89	=Total Cover			s or on a separate s	,
Woody Vine Stratum (Plot size:	_)			Problematic Hydro	. ,	, , ,
1. 2.				¹ Indicators of hydric so be present, unless dist		
	-	=Total Cover		Hydrophytic		
% Bare Ground in Herb Stratum 10 %	Cover of Bioti	c Crust 2		Vegetation Present? Yes _	X No	_
Remarks:						

SOIL Sampling Point: 9

Profile Desc	ription: (Describe	to the depth	needed to doo	cument th	ne indica	tor or	confirm the absence	of indicators.)
Depth	Matrix		Red	ox Featur	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	7.5YR 3/4	97	2.5YR 4/8	3	С	PL	Loamy/Clayey	Prominent redox concentrations
4-9	7.5YR 3/3	95	2.5YR 4/8	- 	C	PL	Loamy/Clayey	Prominent redox concentrations
			5YR 4/6	4				Prominent redox concentrations
			011(4/0					Tremment rodex concentrations
=	-					-		
l ———		- — –						
								
¹ Type: C=Co	ncentration, D=Dep	oletion, RM=R	educed Matrix,	CS=Cove	red or C	oated S	and Grains. ² Loc	ation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applica	able to all LR	Rs, unless oth	erwise n	oted.)		Indicato	rs for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Re	edox (S5)			1 cm	n Muck (A9) (LRR C)
Histic Ep	ipedon (A2)		Stripped	Matrix (S6	6)		2 cm	n Muck (A10) (LRR B)
Black His	stic (A3)		Loamy M	ucky Mine	eral (F1)		Iron-	-Manganese Masses (F12) (LRR D)
Hydroger	n Sulfide (A4)		Loamy G	leyed Mat	trix (F2)		Red	uced Vertic (F18)
Stratified	Layers (A5) (LRR (C)	Depleted	Matrix (F	3)		Red	Parent Material (F21)
1 cm Mu	ck (A9) (LRR D)		Redox Da	ark Surfac	e (F6)		Very	Shallow Dark Surface (F22)
Depleted	Below Dark Surfac	e (A11)	Depleted	Dark Sur	face (F7))	Othe	er (Explain in Remarks)
	rk Surface (A12)		X Redox De	epression	s (F8)			
	ucky Mineral (S1)							
Sandy G	eyed Matrix (S4)	³Indicators	of hydrophytic	vegetatio	n and we	tland h	ydrology must be pres	ent, unless disturbed or problematic.
Restrictive L	ayer (if observed):	:						
Type: _								
Depth (in	ches):		_				Hydric Soil Presen	t? Yes X No
Remarks:								
HYDROLO	GY							
Wetland Hyd	rology Indicators:							
_	ators (minimum of o		d; check all that	apply)			Seconda	ary Indicators (minimum of two required)
	Vater (A1)		Salt Crus					er Marks (B1) (Riverine)
High Wa	er Table (A2)		X Biotic Cru	ıst (B12)			Sedi	iment Deposits (B2) (Riverine)
Saturatio	n (A3)		Aquatic I	nvertebrat	tes (B13)		Drift	Deposits (B3) (Riverine)
Water Ma	arks (B1) (Nonriver	rine)	Hydroger					nage Patterns (B10)
	t Deposits (B2) (No	•				_	· · · · —	Season Water Table (C2)
	osits (B3) (Nonrive	rine)	Presence			. ,		fish Burrows (C8)
	Soil Cracks (B6)	. (5-)	Recent Ir			lled Soi	· · · · —	rration Visible on Aerial Imagery (C9)
	n Visible on Aerial	Imagery (B7)	Thin Muc					llow Aquitard (D3)
_	ained Leaves (B9)		Other (Ex	cpiain in R	temarks)		FAC	-Neutral Test (D5)
Field Observ				D " "				
Surface Wate		es	No X		nches): _			
Water Table Saturation Pr		es	No X		nches): _		Watland Usdrala	ay Procent? Vec V No
(includes cap		es	NoX	Depth (i	- (Inclines		vvetianu nyuroio	gy Present? Yes X No No
	orded Data (stream	n dalide moni	toring well aeri	al photos	previous	sinsner	tions) if available.	
200011001100	July Data (Stroati	. 34490, 1110111	won, acm	pi 10103	, p. 5 v 10 u c	oput	,, ii availabio.	
Remarks:								

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region

See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)

Project/Site: Table Mountain RV Resort		City/Coun	ty: Oroville/E	Butte	Sampling Date:	11/08/2023
Applicant/Owner: Dean Kassenbaum				State: CA	Sampling Point:	10
Investigator(s): Dan Machek		Section, To	ownship, Rar	nge: Section 01, T 19N	, R 03E	
Landform (hillside, terrace, etc.): terrace	Loc	al relief (co	ncave, conve	ex, none): concave	Slop	e (%):2
Subregion (LRR): <u>LRR C</u> Lat: <u>39.5251961</u>			Long: <u>-12</u>	21.5778890	Datum:	NAD83
Soil Map Unit Name: Tompsonflat-Oroville, 0 to 9 percent	t slopes			NWI classifi	cation: N/A	
Are climatic / hydrologic conditions on the site typical for	this time of ye	ar? Y	es X	No (If no, exp	lain in Remarks.)	
Are Vegetation No , Soil No , or Hydrology No sig	gnificantly dist	urbed? Ar	e "Normal Ci	rcumstances" present?	Yes X No	
Are Vegetation No , Soil No , or Hydrology No na	turally probler	matic? (If	needed, exp	lain any answers in Ren	narks.)	
SUMMARY OF FINDINGS – Attach site map	showing	sampling	point loc	ations, transects,	important feat	ures, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	X		Sampled Are a Wetland?		No_X_	
Remarks:		ė				
VECETATION Has asis wife a server of all	4-					
VEGETATION – Use scientific names of pla		ominant	Indicator I			
<u>Tree Stratum</u> (Plot size:)		Species?	Status	Dominance Test work	ksheet:	
1			_	Number of Dominant S	•	
2				Are OBL, FACW, or FA		0 (A)
3. 4.				Total Number of Domir Across All Strata:	•	2 (B)
	=Tc	tal Cover		Percent of Dominant S		(5)
Sapling/Shrub Stratum (Plot size:)				Are OBL, FACW, or FA	•	0% (A/B)
1				Duning land and land and and and and and and and and and	ulva la a a 4 ·	
2. 3.				Prevalence Index wor Total % Cover of:		oly by:
4.				OBL species 0		0
5.				FACW species 0		0
_	=Tc	otal Cover	,	FAC species 0	x 3 =	0
Herb Stratum (Plot size: 5' r)				FACU species 40		60
1. Avena sp.	40	Yes -	UPL	UPL species 50	-	50 (5)
2. Erodium botrys	40	Yes _	FACU	Column Totals: 90		10 (B)
3. Bromus diandrus 4.	10	No	UPL	Prevalence Index =	= B/A = 4.56	
				Hydrophytic Vegetation	 on Indicators:	
6.			-	Dominance Test is		
7.				Prevalence Index i		
8.				Morphological Ada	aptations¹ (Provide s	supporting
	90 =Tc	otal Cover		data in Remarks	s or on a separate s	heet)
Woody Vine Stratum (Plot size:)				Problematic Hydro	phytic Vegetation ¹	(Explain)
1.				¹ Indicators of hydric so		
2		otal Cover		be present, unless dist	urbed or problemati	C.
-		nai Guvei		Hydrophytic		
% Bare Ground in Herb Stratum10 % Co	ver of Biotic C	rust	_	Vegetation Present? Yes_	NoX	_
Remarks:						

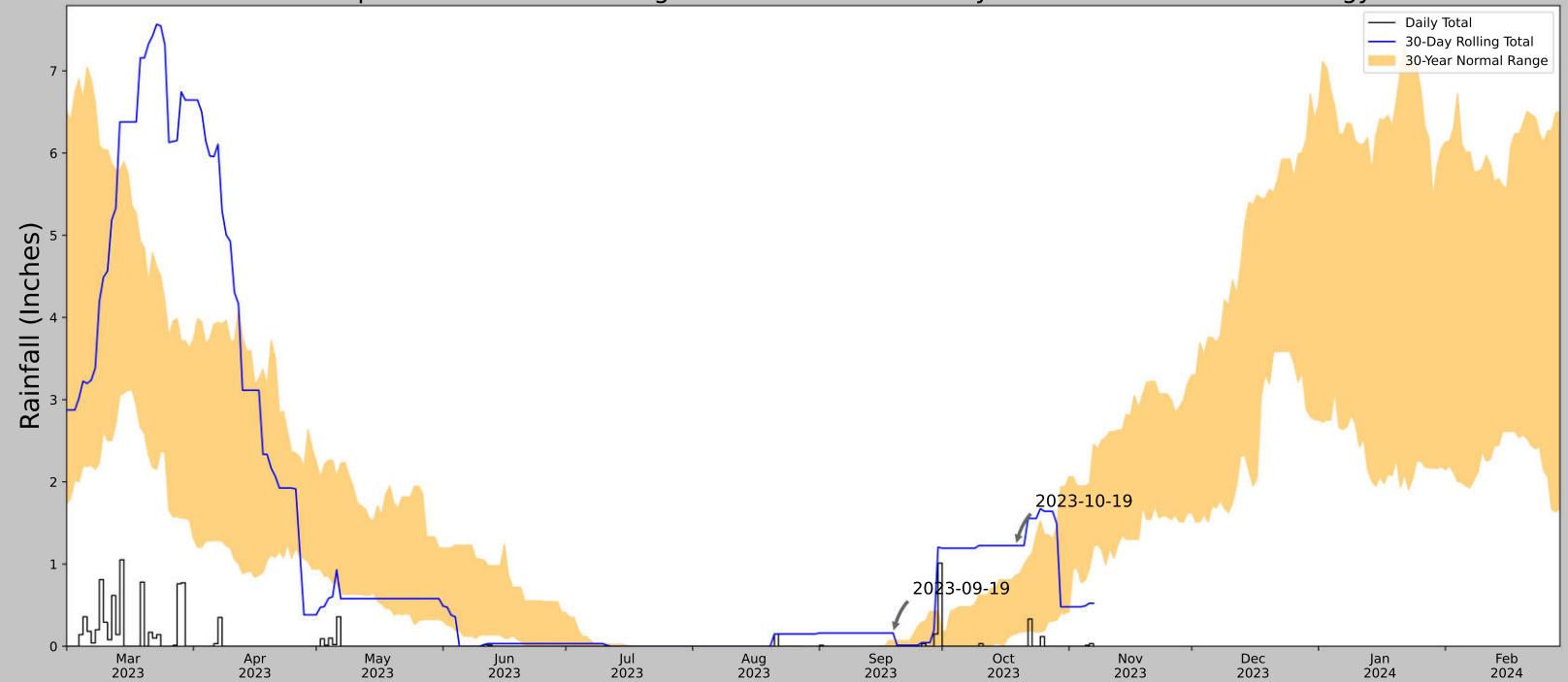
SOIL Sampling Point: 10

Depth	Matrix	to the depti		x Features	cator or (confirm the absence o	n muicaturs.)
(inches)	Color (moist)	%	Color (moist)	% Type	1 Loc ²	Texture	Remarks
0-9	7.5YR 2.5/3	100					
		· -					
				· -			
						<u></u> .	
					_		
-							
¹ Type: C=Co	ncentration, D=Dep	 letion_RM=F	Reduced Matrix C	S=Covered or	Coated S	and Grains ² I oca	tion: PL=Pore Lining, M=Matrix.
	ndicators: (Applica				Coalca C		s for Problematic Hydric Soils ³ :
Histosol (Sandy Red	•			Muck (A9) (LRR C)
	pedon (A2)		Stripped M				Muck (A10) (LRR B)
Black His				cky Mineral (F	1)		Manganese Masses (F12) (LRR D)
	Sulfide (A4)			eved Matrix (F2			ced Vertic (F18)
<u> </u>	Layers (A5) (LRR 0	2)	Depleted N	,	,		Parent Material (F21)
	ck (A9) (LRR D)	-,		k Surface (F6)			Shallow Dark Surface (F22)
	Below Dark Surface	e (A11)	-	Dark Surface (F	7)		(Explain in Remarks)
	rk Surface (A12)	5 (7 (1 1)		pressions (F8)	.,		(Explain in Nomano)
	ucky Mineral (S1)			5,000,01,0 (1.0)			
	eyed Matrix (S4)	³ Indicator	s of hydrophytic v	egetation and v	vetland h	vdrology must be prese	ent, unless disturbed or problematic.
	ayer (if observed):		<u> </u>			,	•
Type:	, (
Depth (in	ches):		_			Hydric Soil Present	? Yes No X
HYDROLO	GY						
Wetland Hyd	rology Indicators:						
-	ators (minimum of c	ne is require					y Indicators (minimum of two required
	Vater (A1)		Salt Crust				r Marks (B1) (Riverine)
	er Table (A2)		Biotic Crus				ment Deposits (B2) (Riverine)
Saturation	` '			vertebrates (B1	,		Deposits (B3) (Riverine)
	arks (B1) (Nonriver			Sulfide Odor (C			age Patterns (B10)
	Deposits (B2) (No			Rhizospheres o	_	` ' _ '	Season Water Table (C2)
	osits (B3) (Nonrive	rine)		of Reduced Iron			ish Burrows (C8)
	Soil Cracks (B6)			n Reduction in	Tilled Soi	` '	ration Visible on Aerial Imagery (C9)
	n Visible on Aerial I	magery (B7)		Surface (C7)	- \		ow Aquitard (D3)
_	ained Leaves (B9)		Other (Exp	lain in Remark	s)		Neutral Test (D5)
Field Observ			N- V	D 41- (! 1)			
Surface Wate			1.	Depth (inches)			
Water Table F				Depth (inches)		Wetland Undrale	wy Dresent? Ves No V
Saturation Pre		,s	NoX	Depth (inches)		Wetland Hydrolog	gy Present? Yes No X
(includes capi	orded Data (stream	dalide mor	itoring well seria	I photos previo	ue inener	tions) if available:	
Describe Lec	orded Data (Stream	gauge, moi	illoring well, aeria	i priotos, previo	us ilisped	Silons), ii avaliable.	
Remarks:							
Remarks:							
Remarks:							

APPENDIX C

Antecedent Precipitation Tool

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	39.525576, -121.576625
Observation Date	2023-10-19
Elevation (ft)	252.791
Drought Index (PDSI)	Mild wetness
WebWIMP H ₂ O Balance	Dry Season

30 Days Ending	30 th %ile (in)	70 th %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2023-10-19	0.149606	0.865748	1.224409	Wet	3	3	9
2023-09-19	0.0	0.068898	0.161417	Wet	3	2	6
2023-08-20	0.0	0.0	0.0	Normal	2	1	2
Result						Ĵ,	Wetter than Normal - 17



Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted ∆	Days Normal	Days Antecedent
OROVILLE MUNI AP	39.4942, -121.6222	187.008	3.256	65.783	1.679	9159	90
OROVILLE	39.5178, -121.5531	170.932	4.028	16.076	1.877	2161	0
OROVILLE 2.7 ENE	39.514, -121.518	535.105	5.721	348.097	4.566	1	0
CHICO UNIV FARM	39.6911, -121.8211	185.039	17.24	1.969	7.792	30	0
MARYSVILLE AP (ASOS)	39.1019, -121.5689	62.008	27.255	125.0	15.672	1	0

APPENDIX D

Plant Species Observed Onsite

Appendix D. Plants Observed Onsite (October 19, 2023)

Scientific Name	Common Name	Wetland Indicator Status
Alisima triviale	Northern water plantain	OBL
Avena sp.*	Wild oat	-
Briza maxima*	Rattlesnake grass	N/L
Briza minor*	Little quaking grass	FAC
Bromus diandrus*	Ripgut brome	N/L
Bromus hordeaceus*	Soft brome	FACU
Bromus rubens*	Foxtail brome	N/L
Centaurea solstitialis*	Yellow star-thistle	N/L
Centromadia sp.	Tarweed species	N/L
Convolvulus arvensis*	Field bindweed	N/L
Croton setiger	Turkey mullein	N/L
Cynodon dactlyon*	Bermuda grass	FACU
Cyperus sp.	Nutsedge species	NL
Eleocharis palustris	Common spike-rush	OBL
Elymus caput-medusae*	Medusahead grass	N/L
Erodium botrys*	Broadleaf filaree	FACU
Eucalyptus globulus*	Blue gum eucalyptus	N/L
Festuca perennis*	Annual ryegrass	FAC
Frangula californica	Coffeeberry	N/L
Grindelia camporum	Common gumplant	FACW
Heteromeles arbutifolia	Toyon	N/L
Hordeum marinum*	Mediterranean barley	FAC
Juglans hindsii	Northern California black walnut	FAC
Juncus effusus	Soft rush	FACW
Lactuca serriola*	Prickly lettuce	FACU
Leontodon saxatillis*	Lesser hawkbit	FACU
Lythrum hyssopifolium*	Hyssop loosestrife	OBL
Morus alba*	Mulberry	FACU
Olea europaea*	European olive	N/L
Paspalum dilatatum*	Dallis grass	FAC
Persicaria hydropiperoides	Water pepper	OBL
Pistacia chinensis*	Chinese pistache	N/L
Polypogon monspeliensis*	Annual rabbit's-foot grass	FACW
Populus fremontii	Fremont's cottonwood	FAC
Quercus douglasii	Blue oak	N/L
Quercus wislizeni	Interior live oak	N/L
Rubus armeniacus*	Himalayan blackberry	FAC
Rumex crispus*	Curly dock	FAC

Schoenoplectus acutus	Hard-stem club-rush	OBL
Sesbania punicea*	Red wisteria	FACW
Toxicodendron diversilobum	Poison oak	FACU
Triadica sebifera*	Chinese tallowtree	FAC
Trichostema lanceolatum	Vinegar weed	FACU
Tridens flavus*	Purpletop tridens	N/L
Trifolium hirtum*	Rose clover	N/L
Typha angustifolia*	Narrow leaf cattail	OBL
Vitis californica	California wild grape	FACU

^{* -} Non-native Species Wetland Status Codes:

OBL - Obligate Wetland; Almost always occur in wetlands

FACW - Facultative Wetland; Usually occur in wetlands, but may occur in non-wetlands

FAC - Facultative; Occur in wetlands and non-wetlands

FACU - Facultative Upland; Usually occur in non-wetlands, but may occur in wetlands UPL - Obligate Upland; Almost never occur in wetlands

N/L - Plants that are Not Listed; Does not occur in wetlands in any region

APPENDIX E

Representative Site Photographs



Photo 1. Unnamed intermittent creek



Photo 3. Seasonal Wetland Swale 1



Photo 5. Vernal Pool 1



Photo 2. Upstream side of unnamed intermittent creek where it enters Study Area through a culvert .



Photo 4. Upland sampling point 3



Photo 6. Upland sampling point 6





Photo 7. Seasonal Wetland Swale 2



Photo 9. Overview of Study Area looking north



Photo 8. Overview of Study Area looking west



Photo 10. Overview of Study Area looking east

APPENDIX F

USACE ORM Aquatic Resources Table

Waters_Name	State	Cowardin_Code	HGM_Code Meas_Ty	pe Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
C-1	CALIFORNIA	R4	Area	0.009	ACRE	DELINEATE	39.52489	-121.57483	
SW-1	CALIFORNIA	PEM	Area	0.030909	ACRE	DELINEATE	39.52423	-121.57555	
SWS-1	CALIFORNIA	PEM	Area	0.031944	ACRE	DELINEATE	39.52500	-121.57757	
SWS-2	CALIFORNIA	PEM	Area	0.007733	ACRE	DELINEATE	39.52517	-121.57778	
VP-1	CALIFORNIA	PEM	Area	0.036171	ACRE	DELINEATE	39.52522	-121.57510	

APPENDIX E (CONFIDENTIAL)

Appendix E – Cultural Resources Inventory Report (Confidential), ECORP, 2024

APPENDIX F

Appendix F – Energy Consumption Assessment for the Oroville RV Resort Project, ECORP, 2024

Proposed Project Total Construction-Related and Operational Gasoline Usage Construction

Table 1. Construction in First Calendar Year										
Action	Construction Equipment Emission Factor ²									
Project Construction	291	291,000	10.15							
Total Gallons Consumed Duri	otal Gallons Consumed During First Calendar Year of Construction:									

Table 2. Construction in Second Calendar Year										
Action Carbon Dioxide Equivalents (CO ₂ e) in Metric Tons Conversion of Metric Tons to Kilograms ² Construction Equipment Emission Factor ²										
Project Construction	Project Construction 412 412,000 10.15									
Total Gallons Consumed Duri	ing Second Calendar Year of Construction:		40,591							

Sources:

²Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1*. January 2016. http://www.theclimateregistry.org/wp-content/uploads/2014/11/General-Reporting-Protocol-Version-2.1.pdf

¹ Oroville RV Resort Appendix A (CalEEMod Outputs).

Proposed Project Total Construction-Related and Operational Gasoline Usage Operations

Total Onroad Vehicle G	Gallons Consumed in Bu	tte County in 2025						
Area	Sub-Area	Calendar Year	Season	Veh_tech	EMFAC 2021 Category	Gallons Consumed in	Total Onroad Vehicle Miles Traveled in Butte County in 2025	Total Passenger Vehicle Miles per Gallon in Butte County in 2025
Sub-Areas	Butte County	2025	Annual	All Vehicles	All Vehicles	105,676,361	2,170,333,090	20.54
Sources:								

³California Air Resource Board. 2021. EMFAC2021 Mobile Emissions Model.

Table 5. Total Gallons				
Project Daily Trips ³	Estimated Miles per Gallon ³	Project Onroad Vehicle Daily Miles Traveled	Project Onroad Vehicle Daily Fuel Consumption	Project Onroad Vehicle Annual Fuel Consumption
360	20.54	7,393.52	360.00	131,400
Sources:				

³Headway Transportation 2024; ⁴CalEEMod 2022.1.1.

APPENDIX G

Appendix G – Noise Assessment for the Oroville RV Resort Project, ECORP, 2024

BASELINE NOISE MEASUREMENTS

Site Number: ST 1
Recorded By: Rosey Worden

Job Number: 2023-217.01

Date: 5/6/2024

Time: 10:45 a.m. – 111:00 a.m.

Location: Western boundary of Project Site directly adjacent to Hearthstone School classroom buildings.

Source of Peak Noise: Yard maintenance equipment, school bells, and vehicles on surrounding roadways.

Noise Data						
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)			
49.2	41.8	69.0	91.4			

	Equipment Equipment							
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note		
	Sound Level Meter	Larson Davis	821	40159	1/3/2024			
Caad	Microphone	Larson Davis	377B02	348852	12/19/2023			
Sound	Preamp	Larson Davis	PRM821	001240	12/11/2023			
	Calibrator	Larson Davis	CAL200	21985	12/19/2023			
			Weather Data					
	Duration: 15 mins Sky: Clear							
	Note: dBA Offset	= 0.01		Sensor Height (ft): 4				
Est.	Wind Ave Spe	ed (mph)	Temperature (deg	rees Fahrenheit)	Barometer Press	ure (hPa)		
	4		56 30		30.15			

Photo of Measurement Location



SoundExpert 821 Summary:

User:

:sətoV

Location: Job Description:

SIVAD NOSAA

Γ ^{Σbκ} > 1⊄0 qB	0	0		
г ^{zbк} >137 дв	0	0		
Г ^{∑bк} > 132 qВ	0	0		
8p 96 < ^{SZ} 7	0	0		
89 98 < ⁸² 7	0	0		
	Count	Duration		
Exceedances				
0.00 SA_ LAS 90.0	45.0 dB			
L _{AS} 66.6	8b £.34			
2.85 33.3 LAS 50.0	8b 2.84 8b 2.74			
0.01 RA-	85.2.28			
0.8 SA⊐ 1	8b 4.83			
Ln Percentiles				
Noise Floor	Bb 0.۲۱	8b 0.8f	SP.0 dB	
Under Range Limit	8b 0.4s	27.0 dB	37.0 dB	
Under Range Peak	ab 0.03	8b 0.03	8b 0.2a	
	A	Э	Z	
Overload Duration	00:00:00			
Overload Count	0			
L _{Ceq} - L _{Aeq}	8b 0.41			
	8b 2.94	8b 2.64	8p	gp
	LDEN LOS CO	00:49:00 19:00:49:00	dB LEve (19:00-22:00)	LNight (22:00-07:00)
Community Noise	LDN 8b 2.94	LD3.7(0):70) γεσ Δ 8b 2.94	<u> </u>	
W = frequency weighting (A, C)		50-00 00-20, ······	(00-20 00-66) 74-111	
	2024-05-06 11:00:29	2024-02-06 10:58:05	2024-02-09 10:28:02	
Lwimax	ab 8.27	8b 6.87	85.8 ab	
	2024-06-06 10:48:36	2024-06-06 10:48:26	2024-06-06 11:00:52	
L _{wlmin}	44.4 dB	Bb £.85	ab 1.£a	
	2024-05-06 11:00:29	2024-05-06 11:00:31	2024-05-06 10:58:05	
LwFmax	ab 0.69	8b 4.47	8b 1.16	
11111 IA-	2024-02-06 10:48:26	2024-02-06 10:48:14	2024-02-06 10:48:36	
LwFmin	8b 8.14	Bb 8.43	8b 4.72	
LwSmax	86:33 dB 2024-05-06 10:88:08	73.3 dB \$2024-05-06 11:00:31	84.2 dB 2024-05-06 10:58:05	
- '	72:84:01 90-80-4202 ab c ca	2024-09-90-90-90	70:64:01 90-50-4202 dp c vo	
LwSmin	8b 7.S4	86.2.88 36.96, 90, 30, 4000	8b 1.00	
	2024-05-06 11:00:29	202-109-90-90-707	2024-02-06 10:58:05	
L^{wpk}	8b 4.1e	8b 3.09	ab 3.39	
- - - - - - - - - - - - - - - - - - -	2.64	1.59	8.69	
L.	A	О	Z	
L _{Aleq}	ab 6.53			
Post-Sensitivity	84\V F an Bb 27.32-			
Pre-Sensitivity Post-Calibration Deviation (89\\\b 19 db 68.6S- (Ab 0 4t t\Ab 0 0- (Iv Lis:	2024-05-06 11:02:21		
Pre-Salibration Deviation (C		Z0Z 4 -02-00 06:26:21		
Run Time	00:91:00	2027 06 06 00-60-67		
Stop Date & Time	2024-06-11:00:54			
Start Date & Time	2024-06-06 10:45:54			
Overall Measurement				
	9CDF:6638B4E2:00000ADA			
Microphone	377802			
Preamp	PRM821			
Meter	SoundExpert 821	40126		
	ІэроМ	Serial		
Meter General Informatio	u			

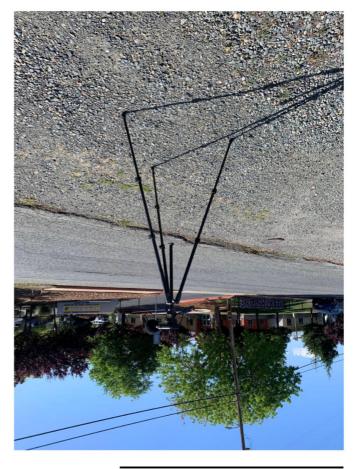


Powered by Larson Davis

102.6	G. <i></i> ₽7	6.85 85.33					
ьезк (qв)	(др) хвт	(ab) nimJ	Leq (dB)				
Moise Data							
	nd students/teachers taking.	des on 6th Street, school bell, a	Source of Peak Noise: Vehic				
		Nelson Avenue Middle School	Location: Front parking lot of				
		•\	Time: 10:01 a.m. – 10:16 a.m				
Date: 5/6/2024							
	Job Number: 2023-217.01						
Gecorded By: Rosey Worden							
			Site Number: ST 2				

	30.15	99				7		
пке (РРа)	Barometer Pressi	ees Fahrenheit)	nperature (degr	Wind Ave Speed (mph) Temperature (do			.ts∃	
		Sensor Height (ft): 4			10.0 =	Note: dBA Offset	, -	
		2kу: Сlear			S	Duration: 15 mins		
,			Veather Data	٨				
	12/19/2023	21985	CAL200	siv	Larson Da	Calibrator		
	12/11/2023	001240	PRM821	siv	Larson Da	Preamp	punos	
	12/19/2023	348852	377B02	siv	Larson Da	Microphone	7	
	1/3/2024	40159	128	siv	Larson Da	Sound Level Meter		
atoM	Cert. Date	Serial No.	ləboM		Vendor	Туре	Category	
	·		######################################					

Photo of Measurement Location



SoundExpert 821 Summary:

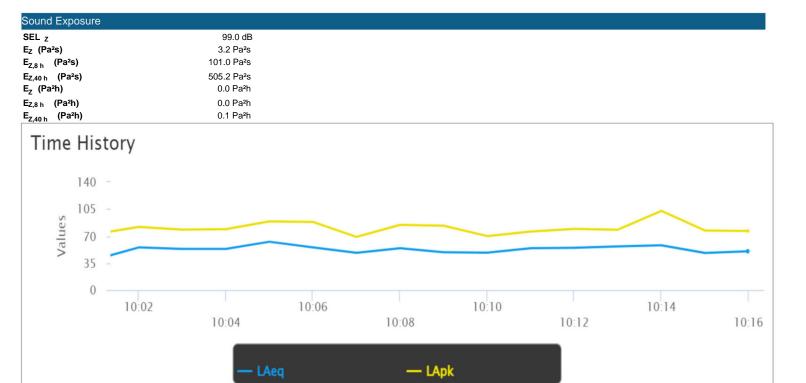
User:

Location: Job Description:

SIVAD NOSAAJ

A PCB DIVISION Notes:

bk > 140 qB	0	0		
ab 781 < _{Aq}	0	0		
^{bk} >132 qB	0	0		
ab 39 < 8	0	0		
8b	l	7		
	Count	Duration		
se aoro	do F.FF			
9.99 S.	8b 4.44			
0.05 8.	8b 2.74			
£.££ 23.3	85.94 Bb 6.84			
0.01 S.	8b 4.73			
0.5 S.	81.3 dB			
Percentiles	dr c 73			
ise Floor	8b 0.71	ab 0.81	29.0 dB	
der Range Limit	24.0 dB	8b 0.72	35.0 ab	
der Range Peak	50.0 dB	8b 0.08	8b 0.28	
1,0	A	O	Z	
erload Duration	00:00:00		_	
erload Count	0			
ped - L _{Aeq}	8b 2.8			
•	25.3 dB	85.33 dB	8b	gp
	Греи	LDay (07:00-19:00):70-00:S2) 34giNJ
	65.3 dB	85.3 dB	8b	
mmunity Noise	ГВИ	LDay (07:00-22:0	LNight (22:00-07:00)	
= frequency weighting (A, C or Z)				
	2024-06-06 10:14:22	2024-06-06 10:08:52	2024-06-06 10:08:52	
уешу	ab £.18	85.8 db	ab 0.3e	
	2024-06-06 10:15:09	2024-06-06 10:15:15	2024-02-06 10:10	
nimh	ab 7.Ω₄	ab 6.85	8b 7.28	
	2024-06-06 10:14:22	2024-06-06 10:08:52	2024-06-06 10:08:52	
rEmax	8b ∂.∂7	ab 0.98	ab £.16	
	2024-05-06 10:15:15	72:51:01 90-505-05	2024-02-06 10:15	
nim ³ /	38.9 dB	8b 1.38	ab 6.73	
	2024-05-06 10:05:52	2024-06-06 10:05:52	2024-02-06 10:05:52	
xsm2\	74.5 dB	81.7.18	Bb 2.88	
	2024-05-06 10:15:09	2024-06-06 10:15:15	2024-05-06 10:10:15	
nim8\	ab 6.0₄	8b 3.83	ab 1.0a	
	2024-06-06 10:14:22	2024-06-06 10:08:52	2024-05-06 10:08:52	
/bk	8b 3.201	8b 7.101	35.7.60f	
bə/	5.33	5.69	₱.69	
hou	A	Э	Z	
bəjı	ab s.08			
st-Sensitivity	-25.72 dB re 1V/Pa			
st-Calibration Deviation (Cal Lv		2024-06-06 11:02:21		
e-Sensitivity	89\Vf 91 Bb 68.62-	10100100 00 00 1 707		
e-Calibration Deviation (Cal LvI)	(ab 0.411)ab 70.0	19:69:60 90-90-700		
ours a sine de	00:91:00			
op Date & Time	2024-05-06 10:16:21			
art Date & Time	2024-05-06 10:01:21			
i due File Id 00C:00009CDF vetall Measurement	\$GA00000:17AA88533			
crophone	377B02			
dmea	128M99			
iter	SoundExpert 821	69107		
201	Model	Serial Oaron		
		•	400	-



Powered by Larson Davis

Site Number: ST 3

Recorded By: Rosey Worden
Job Number: 2023-217.01

Date: 5/6/2024

Time: 10:19 a.m. – 10:34 a.m.

Location: On Nelson Avenue across for the Project Site adjacent to house 523.

Source of Peak Noise: Vehicles on Nelson Avenue.

Noise Data							
Leq (dB)	Lmin (dB)	Lmax (dB)	Peak (dB)				
66.4	37.3	92.0	10.2				

	Equipment						
Category	Type	Vendor		Model	Serial No.	Cert. Date	Note
	Sound Level Meter	Larson Dav	is	821	40159	1/3/2024	
Carrad	Microphone	Larson Dav	is	377B02	348852	12/19/2023	
Sound	Preamp	Larson Dav	is	PRM821	001240	12/11/2023	
	Calibrator	Larson Dav	is	CAL200	21985	12/19/2023	
			١	Weather Data			
	Duration: 15 mins Sky: Clear						
	Note: dBA Offset	= 0.01			Sensor Height (ft): 4		
Est.	Wind Ave Spe	ed (mph)	Ter	mperature (degi	ees Fahrenheit)	Barometer Pressi	ıre (hPa)
	4			56		30.15	

Photo of Measurement Location



SoundExpert 821 Summary:

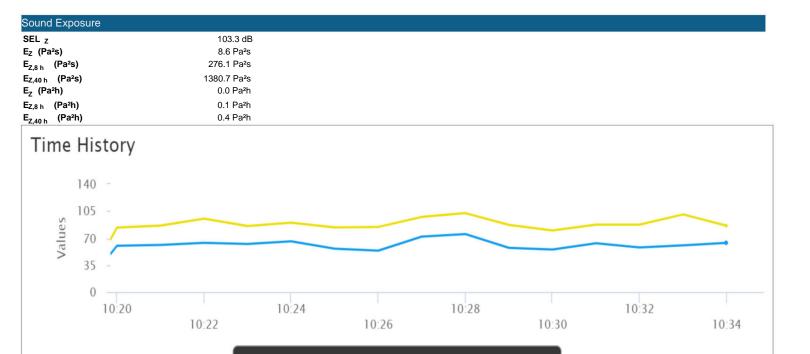
User:

Location: Job Description:

SIVAD NOSAAJ

A PCB DIVISION Notes:

8b 04r < ,	0	0		
8b 7£f < ,	0	0		
8b 351 < >	0	0		
8b 8e <	l	7		
ab	Count 2	Duration 01		
seguces	ţune)	dojjesnig		
0.09	8b 8.64			
9.99	8b 8.74			
20.0	8b 1.13			
33.3	8b 6.8c			
0.01	8b 7.7a			
2.0	8b 4.07			
Percentiles				
36 Floor	3b 0.7t	18.0 dB	S2:0 dB	
er Range Limit	24.0 dB	8b 0.72	37.0 dB	
er Range Peak	50.0 dB	8b 0.08	82.0 dB	
	A	0	Z	
rload Duration	00:00:00			
rload Count	0			
_{p9} A - _p	ab 6.3			
-	8b 4.88	Bb 4.∂8	gb	8b
	ГДЕИ	LDay (00:49:00)	LEve (19:00-22:00)	LNight (22:00-07
	8b 4.88	8b 4.88	8b	
nmunity Noise	ГDИ	LDay (07:00-22:00)	LNight (22:00-07:00)	
o O ,A) gnithgiəw yonəupəri	(Z-			
	2024-05-06 10:28:36	2024-02-06 10:28:36	2024-05-06 10:28:36	
xen	8b 0.2e	ab 8.86	ab 0.99	
	2024-06-06 10:26:24	2024-06-06 10:26:30	2024-05-06 10:26:30	
uju	39.8 Bb	Bb 0.73	8b 7.18	
	2024-05-06 10:28:36	2024-06-06 10:28:36	2024-05-06 10:28:36	
xem	8b 1.16	ab 6.76	ab 0.86	
	2024-06-06 10:26:24	2024-06-06 10:26:30	2024-05-06 10:26:30	
uim	8b £.7£	Bb 3.13	22.5 dB	
	2024-05-06 10:28:36	2024-06-06 10:28:36	2024-06-06 10:28:36	
max	Bb 2.88	8b 1.39	8b £.39	
	2024-06-06 10:26:24	2024-06-06 10:26:30	2024-05-06 10:26:30	
ujw	8b S.8E	8b 0.4c	8b.2.88	
	2024-05-06 10:28:36	2024-06-06 10:28:36	2024-05-06 10:28:36	
К	102.2 dB	307.8 dB	108.0 dB	
b	1 .99	72.3	8.57	
	\forall	Э	Z	
b	8p 6.69			
t-Sensitivity	sq\V↑ əז db sq.,7.2S-			
t-Calibration Deviation (Ca	(41 0.41) -0.06 dB(114.0 dB)	2024-06-06 11:02:21		
Sensitivity	sq\V↑ əז 8b 63.62-			
Calibration Deviation (Cal	(414.0 dB) 0.07 dB(114.0 dB)	7024-06-06 09:59:51		
əmiT	00:12:00			
o Date & Time	2024-06-06 10:34:51			
t Date & Time	19:61:01 90-90-702			
erall Measurement				
	CDE:6638AEC7:00000AD6			
əuoydo.	377B02			
due	PRM821			
Je.	SoundExpert 821	69104		
	ІэроМ	Serial		
er General Information				



Powered by Larson Davis

— LApk

Site Number: LT 1

Recorded By: Rosey Worden
Job Number: 2023-217.01

Date: 5/6/2024

Time: 11:04 a.m. – 11:04 a.m.

Location: Western end of Project Site adjacent to Hearthstone School.

Source of Peak Noise: School bells, birds chirping, and distant vehicle noise on area roadways.

Noise Data				
CNEL	Leq (dB)	Lmin (dB)	Lmax (dB)	
57.1	50.8	36.1	84.3	

Equipment							
Category	Type	Vendor	Model	Serial No.	Cert. Date	Note	
	Sound Level Meter	Larson Davi	is 821	40159	1/3/2024		
Sound	Microphone	Larson Davi	is 377B02	348852	12/19/2023		
Souria	Preamp	Larson Davi	is PRM821	001240	12/11/2023		
	Calibrator	Larson Davi	is CAL200	21985	12/19/2023		
			Weather Data				
	Duration: 24 hou	rs		Sky: Clear			
	Note: dBA Offset	= -0.01		Sensor Height (ft): 5	5		
Est.	Wind Ave Spe	ed (mph)	Temperature (de	egrees Fahrenheit)	Barometer Press	ure (hPa)	
	4		56		30.15		

Photo of Measurement Location



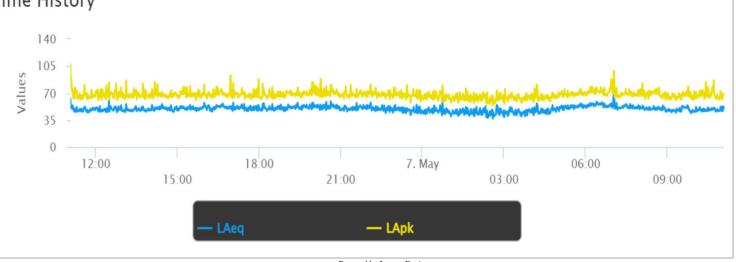
SoundExpert 821 Summary:

Job Description: Location:

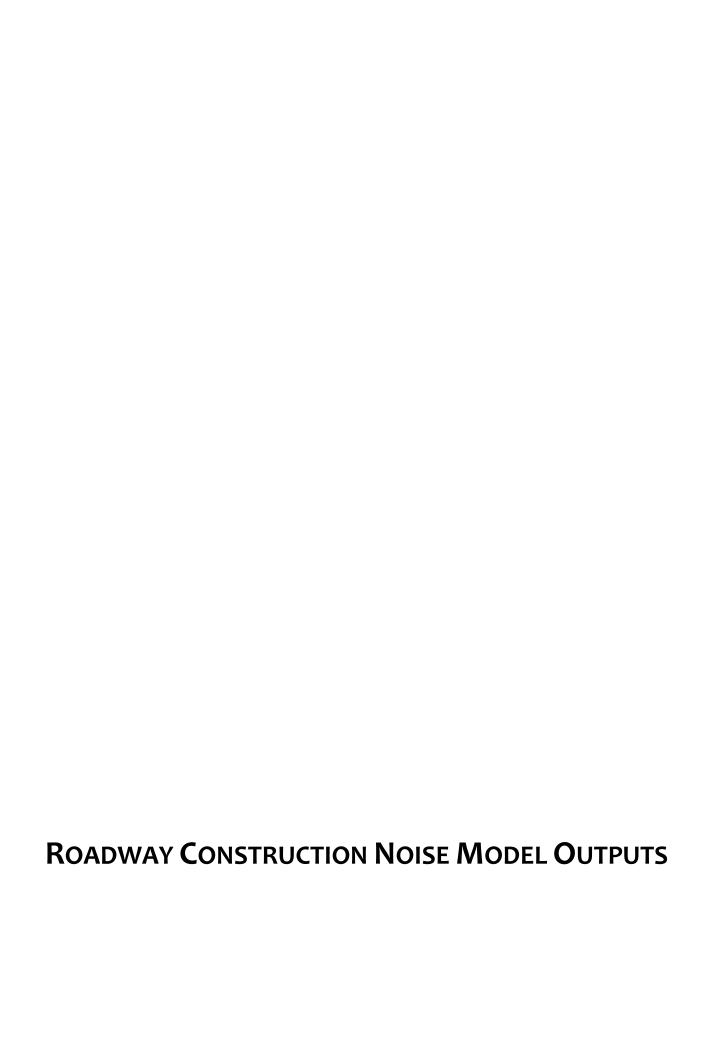
A PCB DIVISION **SIVAD NOSAAJ** (14)

K >140 dB	0 0	0		
k >135 dB	0	0		
8p 96 <	0	0		
8b 28 <	₹	642		
	Count	Duration		
secquices				
0.09	43.4 dB			
9.99	8b 0.74			
0.05	8b 8.8h			
5.55	50.2 dB			
0.01	8b.8.8			
0.8	45.7 dB			
Percentiles	<u> </u>			
se Floor	8b 0.۲۱	ab 0.81	29.0 dB	
ler Range Limit	24.0 dB	8b 0.72	35.0 dB	
ler Range Peak	50.0 dB	8b 0.08 gb 0.55	8b 0.28	
Acod opaca sol	A 95 0 03	C	Z	
Housing provi	v 00:00:00	5	4	
rioad Count rioad Duration	00.00.00			
g - L _{Aeq}				
	8b 6.2r	50 0100	50.1170	40.1100
	8b 1.73	ab 6.03	8b 1.22	50.1 dB
	ГДЕИ	00:91-00:70) γεσΔ		146iNJ
	8b 7.98	8b 2.18	50.1 dB	
nmunity Noise	ГDИ	00:22-00:70) γεσΔ	LNight (22:00-07:00)	
o O ,A) gnithgiəw yonəupəri				
xem	2024-06-06 11:04:22	2024-05-07 07:03:04	7024-05-06 14:16:41	
X040	ab 6.88	ab 3.99	100.2 dB	
	2024-05-07 02:35:50	2024-05-07 01:03:25	2024-05-07 01:18:55	
uim	36.1 dB	85.1 dB	85.73	
	2024-06-07 07:02:14	2024-05-07 07:03:04	14:19:14 90-90-702	
xem	84.3 dB	ab 3.59	Bb 4.79	
	2024-06-07 02:23:39	84:64:07 70-30-4202	2024-06-07 02:13:50	
uim	ab a.cc	8b 4.84	52.0 dB	
	2024-05-07 07:02:14	2024-05-07 07:03:05	2024-05-06 13:53:57	
xews	ab 0.87	91.4 dB	8b 0.4e	
	2024-05-07 02:23:40	2024-06-07 02:24:09	2024-05-07 02:13:47	
nima	34.8 dB	ab 6.03	8b 7.48	
	2024-06-06 11:04:21	2024-06-11:04:10	2024-05-06 11:04:10	
)K	3 dB 8.701	ab	3.70r	
b	8.03	8.£9	6.69	
	A	0	Z	
be	89.9 ab			
t-Sensitivity				
s-Calibration Deviation (Ca	() (<i>t</i>			
-Sensitivity	-25.72 dB re 1V/Pa			
-Calibration Deviation (Cal	(ab 0.411)ab 30.0- (2024-06-06 11:02:21		
əmiT ı	24:00:00			
p Date & Time	2024-05-07 11:04:06			
rt Date & Time	2024-05-06 11:04:06			
erall Measurement				
gue File ld 000:0000	F:6638B926:00000BFB			
rophone	377B02			
dwe	128MA9			
er	SoundExpert 821	69107		
	ІэроМ	Serial		
ter General Information			the second secon	





Powered by Larson Davis



Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/8/2024

Case Description: Site Preparation

Description Affected Land Use

Site Preparation Educational

	Equipment				
			Spec	Actual	Receptor
	Impact		Lmax	Lmax	Distance
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)
Dozer	No	40		81.7	386
Dozer	No	40		81.7	386
Dozer	No	40		81.7	386
Tractor	No	40	84		386
Tractor	No	40	84		386
Tractor	No	40	84		386
Tractor	No	40	84		386

Equipment		*Lmax	Leq
Dozer		63.9	59.9
Dozer		63.9	59.9
Dozer		63.9	59.9
Tractor		66.2	62.3
	Total	66.2	69.9

^{*}Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/8/2024
Case Description: Grading

Description Affeted Land Use

Grading Educational

Equipment				
		Spec	Actual	Receptor
Impact		Lmax	Lmax	Distance
Device	Usage(%)	(dBA)	(dBA)	(feet)
No	40		80.7	386
No	40		80.7	386
No	40	85		386
No	40		81.7	386
No	40		83.6	386
No	40		83.6	386
No	40	84		386
No	40	84		386
	No No No No No No No No	Impact Usage(%) No 40 No 40	Impact Spec Lmax Device Usage(%) (dBA) No 40 40 No 40 85 No 40 40 No 40 40 No 40 40 No 40 84	Impact Spec Lmax Actual Lmax Device Usage(%) (dBA) (dBA) No 40 80.7 No 40 85 No 40 81.7 No 40 83.6 No 40 83.6 No 40 84

Equipment	*Lmax	Leq
Excavator	63	59
Excavator	63	59
Grader	67.2	63.3
Dozer	63.9	59.9
Scraper	65.8	61.8
Scraper	65.8	61.8

Tractor		66.2	62.3
Tractor		66.2	62.3
	Total	67.2	70.5

^{*}Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/8/2024

Case Description: Building Construction, Paving

and Architectural Coating

Description

Affected Land Use

Building Construction, Paving and Architectural Coating

Educational

		E	quipment	t	
			Spec	Actual	Receptor
	Impact		Lmax	Lmax	Distance
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)
Crane	No	16		80.6	386
Gradall	No	40		83.4	386
Gradall	No	40		83.4	386
Gradall	No	40		83.4	386
Generator	No	50		80.6	386
Tractor	No	40	84		386
Tractor	No	40	84		386
Tractor	No	40	84		386
Welder / Torch	No	40		74	386
Paver	No	50		77.2	386
Paver	No	50		77.2	386
Paver	No	50		77.2	386
Paver	No	50		77.2	386
Roller	No	20		80	386
Roller	No	20		80	386
Compressor (air)	No	40		77.7	386

Equipment		*Lmax	Leq
Crane		62.8	54.8
Gradall		65.6	61.7
Gradall		65.6	61.7
Gradall		65.6	61.7
Generator		62.9	59.9
Tractor		66.2	62.3
Tractor		66.2	62.3
Tractor		66.2	62.3
Welder / Torch		56.2	52.3
Paver		59.5	56.5
Roller		62.2	55.3
Roller		62.2	55.3
Compressor (air)		59.9	55.9
	Total	66.2	71.4

^{*}Calculated Lmax is the Loudest value.

SOUNDPLAN OUTPUTS

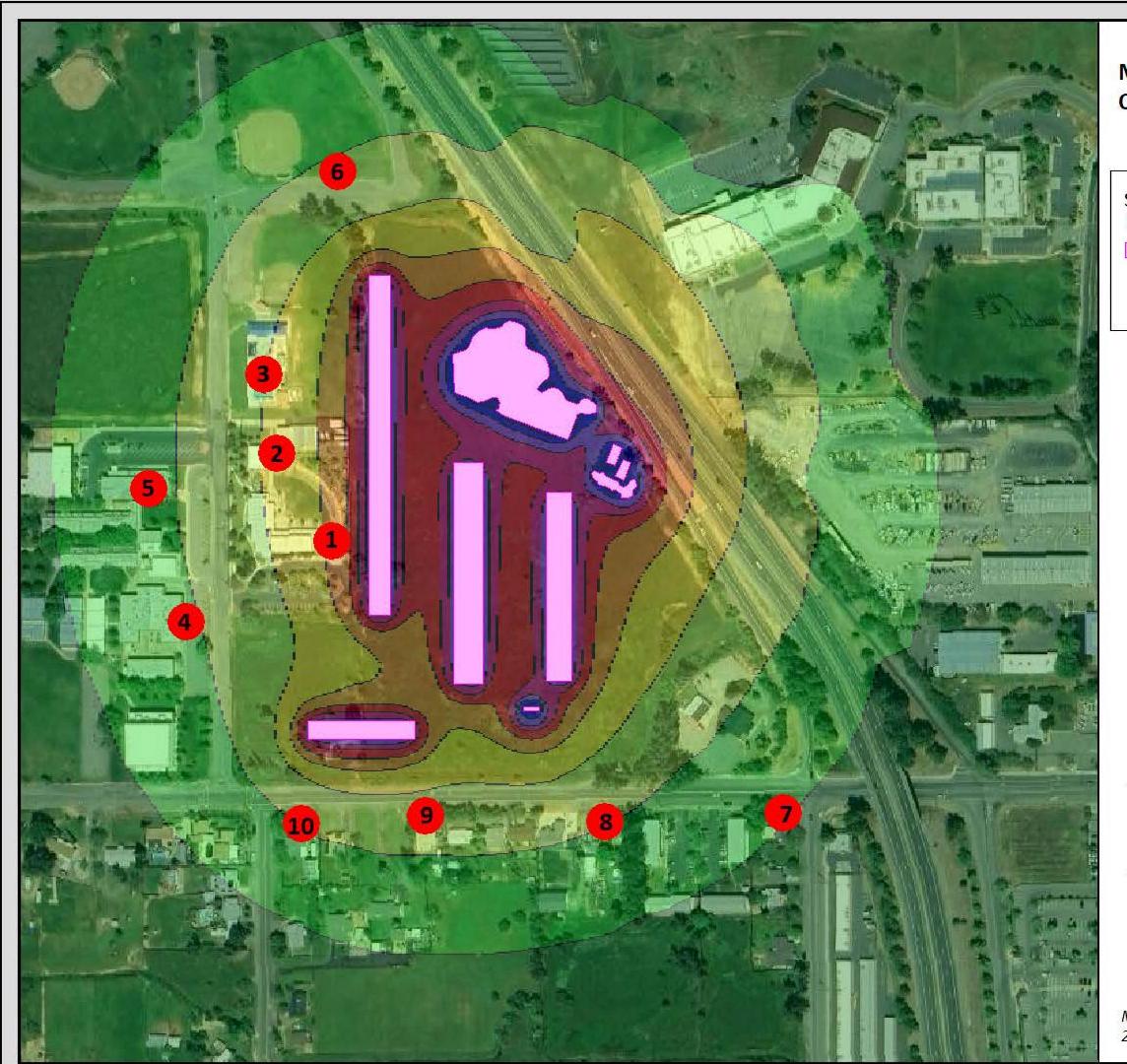
SoundPLAN Output Source Information

Number	Reciever Name	Floor	Level at Receiver (dBA)
1	Hearthstone School Campus	Ground Floor	44.1
2	Hearthstone School Campus	Ground Floor	41.5
3	Nelson Pool	Ground Floor	40.7
4	Nelson Avenue Middle School Campus	Ground Floor	37.5
5	Nelson Avenue Middle School Campus	Ground Floor	37.1
6	Nelson Softball Complex	Ground Floor	37.9
7	Residence South of Project Site Fronting Nelson Avenue	Ground Floor	34.8
8	Residence South of Project Site Fronting Nelson Avenue	Ground Floor	37.9
9	Residence South of Project Site Fronting Nelson Avenue	Ground Floor	39.3
10	Residence South of Project Site Fronting Nelson Avenue	Ground Floor	37.8
Number	Noise Source Information	Citation	Level at Source
1	RV Parking Spacces (Single Family Residential)	ECORP Noise Measurements	54.0 dBA
2	Propane Refill (Gas Station)	ECORP Noise Measurements	67.3 dBA
3	Pickball Activity	ECORP Noise Measurements	63.3 dBA

ECORP Noise Measurements

59.0 dBA

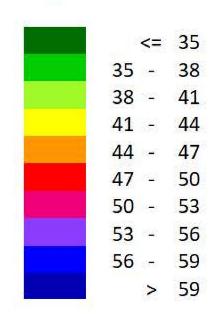
Pool/ Putting Green

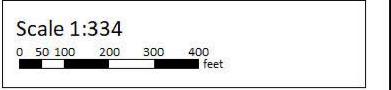


Modeled Operational Noise Levels: Oroville RV Park



Level scale in dB(A) Leq,d







Map Date: 5/10/2024 2023-217.01: Oroville RV Park

APPENDIX H

Appendix H – CEQA Transportation Evaluation – Oroville RV Resort, Headway Transportation, 2024



April 1, 2024

Scott Friend, AICP ECORP Consulting, Inc. 55 Hanover Lane, Suite A Chico, CA 95973

CEQA Transportation Evaluation – Oroville RV Resort

Dear Mr. Friend,

This report presents the findings of a transportation evaluation prepared to assess the potential transportation impacts associated with the proposed Oroville Recreational Vehicle (RV) Resort project in Oroville, CA.

PROJECT DESCRIPTION & SETTING

The Oroville RV Resort project consists of a recreational vehicle resort with 125 RV parking spaces, 8 rental cabins, and a manager's cabin. The project also includes ancillary/accessory features such as a clubhouse,

banquet hall, pool and spa area with outdoor cabanas, welcome center, washhouse, maintenance building, storage building, outdoor adventure play structures, golf putting green, pickleball courts, concrete stage, dog park, and garden area for the RV resort's guests. The project will also include ADA compliant concrete pedestrian pathways throughout and no-mow turf areas.

The project site is located north of Nelson Avenue, east of 6th Street, and west of State Route (SR) 70, as shown in **Exhibit 1**.



Exhibit 1: Project Location

Project Trip Generation

Weekday daily, AM peak hour, and PM peak hour trip generation estimates were calculated based on average trip rates presented in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual,* 11th Edition for the Campground/Recreational Vehicle Park (416¹) land use. Trip generation estimates were calculated for 134 total sites including 125 RV spaces, 8 rental cabins, and 1 manager's cabin. **Table** 1 shows the estimated trip generation.

Table 1: Trip Generation Estimates

Land Use	C:			Trips ¹		
(ITE Code)	Size	Daily ²	AM	AM In/Out	PM	PM In/Out
Campground/RV Park (416)	134 sites	360	28	10 / 18	36	23 / 13

Notes: 1. Trips were calculated based on the following rates per site: AM Peak Hour -0.21 (36% in / 64% out); PM Peak Hour -0.27 (65% in / 35% out)

2. ITE does not have Daily trip rates for a Campground/RV Park. Daily trips were calculated as 10 times the PM peak hour trips.

Source: Headway Transportation, 2024

As shown in the table, the project is expected to generate approximately 360 Daily, 28 AM peak hour, and 36 PM peak hour trips.

Trip Generation for VMT Analysis

Vehicle Miles Traveled (VMT) was calculated for the project using the Butte County Association of Governments (BCAG) travel demand model. The model does not have an RV Park land use, therefore, the hotel land use was used as a proxy for the analysis. An equivalent trip generation was calculated based on the Hotel (310¹) land use. The number of hotel rooms that would generate an equivalent number of trips as an RV Park with 134 site was determined based on the peak hour trip generation, as shown in **Table 2**.

Table 2: Equivalent Hotel Trip Generation Estimates

Land Use	Size	Trips ¹							
(ITE Code)	Size	Daily	AM	AM In/Out	PM	PM In/Out			
Hotel (310)	61 rooms	487	28	16 / 12	36	18 / 18			

Notes: 1. Trips were calculated based on the following rates per room: Daily – 7.99; AM Peak Hour – 0.46 (56% in / 44% out); PM Peak Hour – 0.59 (51% in / 49% out)

Source: Headway Transportation, 2024

As shown in **Table 2**, 61 hotel rooms also generates 28 AM peak hour and 36 PM peak hour trips (the same as 134 RV sites) and conservatively more daily trips. Therefore, 61 hotel rooms were used in the VMT analysis and modelling.

¹ ITE land use code



IMPACT ANALYSIS

Thresholds of Significance

Based on CEQA guidelines, the project would create a significant transportation impact if it would:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities
- Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses Vehicle Miles Traveled (VMT)
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Results in inadequate emergency access

Impact Evaluation

Alternative Transportation Mode Evaluation

The Oroville 2030 General Plan (March 2015) includes a map of existing and proposed bicycle facilities throughout the City. Class I or Class II bicycle facilities are proposed on Nelson Avenue from Wilbur Road to the existing bicycle lanes east of SR 70. The 2030 General Plan Circulation and Transportation Element also includes the following policies related to bicycle and pedestrian planning:

Policy 6.9 – Coordinate the construction and improvement of the bicycle system with development projects adjacent to bikeways, and with park and recreational facilities, schools and residential subdivisions.

Policy 6.10 – Ensure that developments located along existing and future bikeways provide for bicycle use within and adjacent to project boundaries.

Policy 7.5 – Require installation of sidewalks and/or walking paths along all city streets in newly developing areas.

Policy 7.7 – New development in Oroville will encourage pedestrian accessibility and facilitate the use of non-automobile forms of transportation

Based on these policies, it is recommended that the project construct sidewalk and a bicycle lane along the project frontage on Nelson Avenue. The project will include ADA compliant concrete pedestrian pathways throughout the site.

The project would not make any changes to existing multimodal facilities or conflict with multimodal transportation plans with construction of sidewalk and a bicycle lane on Nelson Avenue along the project



frontage. Therefore, the project would have a less-than-significant impact on alternative transportation modes.

Public Transit Evaluation

B-Line (Butte Regional Transit) provides regional public transit service throughout Butte County. Routes 20, 24, and 31 provide service near the project site, with the closest bus stop location approximately ½ mile away. While the project has the potential to incrementally increase demand for public transit, the increase is not likely to cause or necessitate changes to the transit system or facilities. The project would not make any changes to the existing public transit system or conflict with any public transit plans. Therefore, the project would have a less-than-significant impact on public transit.

Safety Evaluation

Evaluation of the existing access routes to the Project does not indicate any unusual conditions. The Project would not introduce incompatible uses or features significantly affecting safety. The design of the project driveway will be in accordance with City of Oroville/Butte County standards. Sight lines at the project driveway location appear to be adequate. Any new signage, structures, or vegetation will not impede sight lines/triangles at the project driveway locations. With access built per City standards, the project would have a less-than-significant impact related to safety and design features.

Emergency Access Evaluation

The 2030 General Plan Circulation and Transportation Element includes the following policy related to emergency access:

Policy 3.3 – New development shall ensure that safe and efficient emergency vehicle access is provided.

The Project includes multiple points of access with driveways on Nelson Avenue and 6th Street, and into Nelson Park, which provide adequate emergency access. The project driveways and internal circulation system will be designed and constructed to applicable City/County standards. Therefore, the project would have a less-than-significant impact related to emergency access.

Vehicle Miles Traveled (VMT) Evaluation

Per SB 743 regulations, the CEQA guidelines require the evaluation of "vehicle miles traveled" (VMT) as a key criterion to determine potentially significant transportation impacts. Although City of Oroville does not currently have formally adopted VMT thresholds, the intent of SB 743 is to reduce VMT compared to current/baseline levels. The *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, published by the Governor's Office of Planning and Research (OPR) includes guidelines for implementation and states:



"Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, **OPR recommends the quantified thresholds** described above [between **no increase** and a 15% reduction compared to existing levels] for purposes of analysis and mitigation. **Lead agencies**, using more location-specific information, **may develop their own more specific thresholds**, which may include other land use types."

Based on OPR's guidance, agencies may set their own VMT thresholds to align with the needs of their community. The overall recommendation is a quantified threshold between no increase and a 15 percent reduction. Therefore, local agencies can determine that any project that does not increase overall VMT per capita is considered to have a less-than-significant impact.

City of Oroville

The City of Oroville 2030 General Plan Circulation and Transportation Element includes the following policies related to vehicle miles traveled (VMT):

Policy 2.5 – Reduce the total vehicles miles traveled through designation of land uses that support multi-modal travel and provision of more direct routes to high activity locations.

VMT Analysis

VMT analysis specific to the project site and trip generation was conducted by Elite Transportation Group in accordance with the *BCAG SB 743 Implementation* (June 2021) document using the BCAG travel demand model. The detailed VMT analysis is included in the *SB 743 VMT Analysis for Oroville RV Resort Project Technical Memorandum* (Elite Transportation Group, February 27, 2023), provided in **Attachment A**.

As discussed in the memorandum and the "Trip Generation for VMT Analysis" section on page 2, the model does not have a RV Park land use, therefore, hotel rooms were used as a proxy for the travel demand modelling analysis. An equivalent trip generation was utilized based on 61 hotel rooms.

The project is located in traffic analysis zone (TAZ) 759 which includes single family housing, retail, park, and school land uses in the Baseline (without project) scenario. **Table 3** shows the "VMT per Worker" for TAZ 759 with the addition of the proposed project (analyzed as 61 hotel rooms). The home based work (HBW) and non-home based (NHB) measures are used for comparison purposes since the hotel land use is a commercial type land use for the purposes of VMT modelling.



Table 3: VMT Analysis Summary

	VMT Attraction									
Scenario	VMT – TAZ 759 (HBW + NHB) ¹	Project VMT	Workers	VMT per Worker						
Baseline	4,904			8.01 ²						
Baseline Plus Project	5,104	200	61	3.29						
Cumulative No Project	7,297			7.45 ²						
Cumulative Plus Project	7,550	253	61	4.15						

Notes: Detailed analysis is provided in Attachment A.

- 1. HBW = home based work; NHB = non-home based
- 2. Oroville citywide average VMT per Worker.

Source: Headway Transportation, 2024

As shown in the table, the project VMT per worker under Baseline Plus Project and Cumulative Plus Project conditions is <u>less</u> than the Oroville citywide average VMT per worker under Baseline No Project and Cumulative No Project conditions.

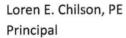
Therefore, the project can be deemed to have a less than significant impact on VMT.

SUMMARY OF FINDINGS

The project is expected to have a less-than-significant impact on Transportation/Circulation related to bicycle and pedestrian facilities, public transit, safety, emergency access, and VMT.

Sincerely,

Headway Transportation, LLC



Attachments

A – SB 743 VMT Analysis for Oroville RV Resort Project Technical Memorandum (Elite Transportation Group, March 28, 2024)





Technical Memorandum

Date: 3/28/2024

To: Loren Chilson, Headway Transportation

Marissa Harned, Headway Transportation

From: Lawrence Liao, ETG

Subject: SB 743 VMT Analysis for Oroville RV Resort Project

OVERVIEW

This technical memorandum describes the assumptions, methodology and results in the SB 743 VMT analysis for Oroville RV Resort project. It includes the following sections:

- Project Description
- Project Trip Generation
- SB743 VMT Analysis
- Result Summary
- Appendices

PROJECT DESCRIPTION

The proposed project includes the development of an RV resort to be located on a currently undeveloped parcel at the northwest corner of Highway 70 and Nelson Ave interchange in the City of Oroville.



The location of the project is illustrated in the map below.



PROJECT TRIP GENERATION

The assumed equivalent hotel trip generation by the proposed RV resort is shown below.

Land	Amount	Trips								
Use		Daily	AM	AM In	AM Out	PM	PM In	PM Out		
Hotel	61 rooms	487	28	16	12	36	18	18		

The project generates more than 110 vehicle trips per day, so it is not qualified for a screening analysis. A full SB 743 VMT analysis is required.



SB743 VMT ANALSYS

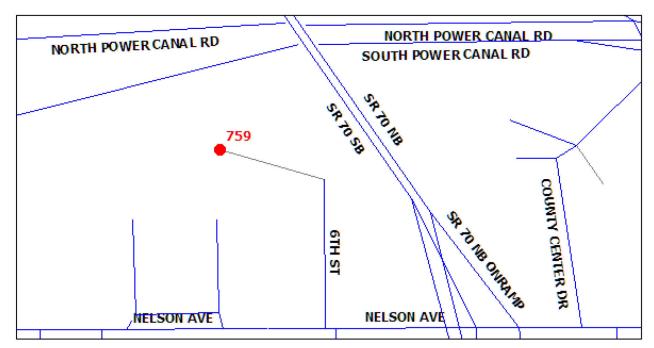
The SB743 VMT analysis for this project was conducted in accordance with the final BCAG SB 743 Implementation Study Document (Guidelines).

As recommended by the Guidelines, the BCAG travel demand model (TDM) was selected for VMT forecasts and analysis to comply with CEQA expectations related to SB 743. BCAG TDM version "BCAG_SB743_TM1.2" was used in this analysis.

The following four scenarios were analyzed using the BCAG TDM:

- Baseline Conditions the 2020 BCAG TDM was used to represent the baseline condition.
- Baseline Plus Project The project land use was added to 2020 BCAG TDM to represent the baseline plus project condition.
- Cumulative No Project
 – the 2045 BCAG TDM was used to represent the cumulative no project
 condition.
- Cumulative Plus Project The project land use was added to 2045 BCAG TDM to represent the cumulative plus project condition.

The model TAZ that includes the project area is 759. For both Plus Project scenarios, 61 hotel rooms were added to model the travel demand by the project. Project TAZ land use data are shown in Appendix A.





The BCAG TDM includes a SB 743 VMT postprocessing tool which generates a VMT by TAZ summary report at the end of a full model run. These VMT by TAZ summary reports, shown in Appendix B, were used to calculate VMT per worker by the project.

The BCAG Model assumes one worker per hotel room and proceed to generate trips by the hotel workers. Thus, the total number of hotel workers was assumed to be 61. The VMT per worker for this project was calculated as HBW VMT attraction divided by total hotel workers.

The calculations of VMT per worker for the Plus Project scenarios are summarized in table below.

	HBW VMT	Attraction		
	Z-759 VMT	Z-759 VMT Project VMT		VMT per Worker
Baseline	4,904			
Baseline Plus Project	5,104	200	61	3.29
Cumulative No Project	7,297			
Cumulative Plus Project	7,550	253	61	4.15

Thresholds

Although the City of Oroville does not currently have formally adopted VMT thresholds, the intent of SB 743 is to reduce VMT compared to current/baseline levels. The *Technical Advisory on Evaluating Transportation Impacts in CEQA*, December 2018, published by the Governor's Office of Planning and Research (OPR) includes guidelines for implementation and states:

"Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above [between no increase and a 15% reduction compared to existing levels] for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types."

Based on OPR's guidance, agencies may set their own VMT thresholds to align with the needs of their community. The overall recommendation is a quantified threshold between no increase and a 15 percent reduction. Therefore, any project that does not increase overall VMT per capita could be considered to have a less-than-significant impact if the lead agency agrees.

The table below shows the Oroville citywide average VMT perworker.

Oroville	HBW VMT	Attraction		
	Citywide		Workers	VMT per Worker
Baseline	119,232		14,884	8.01
Cumulative No Project	127,371		17,099	7.45



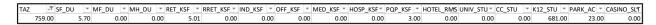
RESULT SUMMARY

The Cumulative Plus Project VMT per worker (4.15) is lower than the Oroville citywide average VMT per worker (7.45) in the Cumulative No Project scenario. This means that the project would reduce VMT per worker if compared to the citywide average in the Cumulative condition.



APPENDIX A – PROJECT TAZ LAND USE

Baseline (2020)



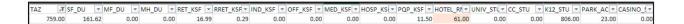
Baseline (2020) Plus Project



Cumulative (2045) No Project

TAZ	-▼ SF	_DU	MF_DU	▼ MH_DU	▼ RET_KSF	RRET_KSF	IND_KSF =	OFF_KSF ~	MED_KSF *	HOSP_KSF *	PQP_KSF ~	HOTEL_RM	S UNIV_STU *	CC_STU ~	K12_STU =	PARK_AC *	CASINO_SL*T
	759.00	161.6	2 0	.00	0.00 16	.99 0.2	0.00	0.00	0.00	0.00	11.50	0.00	0.00	0.00	806.00	23.00	0.00

Cumulative (2045) Plus Project





APPENDIX B – SB743 VMT REPORT

Baseline (2020)

	PROD_HBW	PROD_HBO	PROD_NHB	ATTR_HBW	ATTR_HBO	ATTR_NHB	VMTP_HBW	VMTP_HBO	VMTP_NHB	VMTA_HBW	VMTA_HBO	VMTA_NHB
750.00	400.60	1114.95	38.85	18.67	88.68	33.50	1956.06	19288.38	279.91	72.33	1250.28	290.42
751.00	119.70	319.78	10.83	4.20	11.52	9.94	625.87	5849.44	70.71	40.10	224.09	73.51
752.00	211.63	557.83	0.00	0.00	0.00	0.00	1022.30	10048.95	0.00	0.00	0.00	0.00
753.00	134.79	373.66	0.00	0.00	0.00	0.00	617.55	6718.86	0.00	0.00	0.00	0.00
754.00	158.87	444.51	0.00	0.00	0.00	0.00	871.13	7790.43	0.00	0.00	0.00	0.00
755.00	6.32	18.99	0.00	0.00	0.00	0.00	33.97	337.89	0.00	0.00	0.00	0.00
756.00	103.42	284.09	0.00	0.00	0.00	0.00	560.74	4954.27	0.00	0.00	0.00	0.00
757.00	138.35	390.68	30.26	11.50	33.75	29.71	695.80	6914.31	197.67	106.75	655.65	232.31
758.00	96.40	277.24	5.64	2.36	20.75	5.87	435.50	4940.54	43.43	7.05	295.31	54.57
759.00	5.38	15.24	245.58	534.09	482.41	309.28	24.60	278.38	976.42	4903.86	9166.12	1192.45
760.00	84.90	241.86	183.54	330.14	413.77	217.03	341.95	4413.27	985.87	3025.77	7482.28	1083.37
761.00	179.01	529.12	12.14	5.03	44.49	12.50	771.47	9474.76	102.96	14.62	639.07	113.50
762.00	232.12	649.74	0.00	0.00	0.00	0.00	974.33	11513.89	0.00	0.00	0.00	0.00
763.00	196.43	593.49	11.66	5.58	47.02	13.62	942.43	10796.88	115.28	27.15	700.88	110.94
764.00	261.52	726.74	745.19	329.78	896.50	761.34	1219.21	13050.77	5788.76	3178.21	16570.72	5173.34
765.00	73.04	225.37	363.67	260.52	1269.40	442.28	289.77	4157.27	3601.91	1563.71	20258.34	3373.01
766.00	366.24	992.40	57.09	23.29	142.12	52.66	1326.20	18239.50	468.64	155.96	2287.60	421.10
767.00	155.77	412.59	6.09	2.24	18.76	5.31	590.06	7583.60	49.09	10.00	264.68	43.37
768.00	63.23	168.81	0.00	0.00	0.00	0.00	281.74	3067.55	0.00	0.00	0.00	0.00
769.00	125.90	367.17	226.79	106.57	711.87	233.08	422.60	6954.22	2415.04	356.40	10105.12	1907.72
770.00	1.02	3.19	172.13	103.13	557.28	226.33	2.61	61.17	2018.05	648.48	8564.22	1774.51

Baseline (2020) Plus Project

Z	PROD_HBW	PROD_HBO	PROD_NHB	ATTR_HBW	ATTR_HBO	ATTR_NHB	VMTP_HBW	VMTP_HBO	VMTP_NHB	VMTA_HBW	VMTA_HBO	VMTA_NHB
750.00	400.51	1114.86	38.85	18.62	88.67	33.49	1953.06	19285.33	279.89	72.28	1250.14	290.39
751.00	119.66	319.75	10.83	4.20	11.51	9.95	623.58	5848.55	70.70	40.10	223.92	73.51
752.00	211.56	557.77	0.00	0.00	0.00	0.00	1018.52	10047.30	0.00	0.00	0.00	0.00
753.00	134.78	373.62	0.00	0.00	0.00	0.00	617.94	6717.65	0.00	0.00	0.00	0.00
754.00	158.84	444.48	0.00	0.00	0.00	0.00	869.65	7789.22	0.00	0.00	0.00	0.00
755.00	6.32	18.99	0.00	0.00	0.00	0.00	33.91	337.84	0.00	0.00	0.00	0.00
756.00	103.39	284.06	0.00	0.00	0.00	0.00	559.49	4953.43	0.00	0.00	0.00	0.00
757.00	138.28	390.64	30.26	11.50	33.73	29.71	691.62	6913.29	197.63	106.75	655.29	232.29
758.00	96.29	277.21	5.64	2.34	20.75	5.87	430.88	4939.84	43.42	7.02	295.31	54.56
759.00	5.35	15.22	253.22	605.82	510.86	318.99	24.24	278.04	1031.79	5104.30	9718.82	1253.76
760.00	84.86	241.85	183.53	329.64	413.65	216.98	336.87	4412.78	985.63	3025.01	7480.20	1083.02
761.00	178.89	529.07	12.14	5.01	44.50	12.49	766.70	9473.36	102.94	14.59	639.08	113.47
762.00	232.00	649.67	0.00	0.00	0.00	0.00	962.77	11512.19	0.00	0.00	0.00	0.00
763.00	196.33	593.43	11.66	5.55	47.02	13.62	928.89	10795.53	115.26	27.06	700.89	110.93
764.00	261.36	726.66	745.17	329.68	896.14	761.22	1197.95	13048.88	5787.62	3177.88	16564.26	5172.22
765.00	73.01	225.35	363.67	259.67	1269.30	442.23	286.01	4156.72	3601.52	1562.06	20256.57	3372.48
766.00	366.04	992.30	57.09	23.19	142.11	52.67	1302.11	18236.94	468.60	155.62	2287.33	421.07
767.00	155.71	412.54	6.09	2.21	18.76	5.31	584.40	7582.48	49.09	9.92	264.65	43.37
768.00	63.19	168.79	0.00	0.00	0.00	0.00	275.10	3067.09	0.00	0.00	0.00	0.00
769.00	125.89	367.14	226.78	105.89	711.84	233.07	421.71	6953.20	2414.87	354.69	10104.56	1907.63
770.00	1.02	3.19	172.12	102.68	557.23	226.31	2.62	61.17	2017.87	647.13	8563.20	1774.38



Cumulative (2045) No Project

Z		PROD_HBW	PROD_HBO	PROD_NHB	ATTR_HBW	ATTR_HBO	ATTR_NHB	VMTP_HBW	VMTP_HBO	VMTP_NHB	VMTA_HBW	VMTA_HBO	VMTA_NHB
75	50.00	391.73	1092.03	44.33	21.71	116.91	39.08	1549.77	19364.28	326.01	68.56	1677.31	371.38
75	51.00	123.42	322.45	10.87	3.08	13.32	9.51	532.44	6045.49	75.36	14.57	262.32	69.98
75	52.00	205.51	528.71	0.00	0.00	0.00	0.00	821.35	9797.16	0.00	0.00	0.00	0.00
75	53.00	148.79	408.27	0.00	0.00	0.00	0.00	622.55	7651.79	0.00	0.00	0.00	0.00
75	54.00	192.92	539.92	7.90	3.06	25.69	7.23	914.01	9689.95	63.71	9.82	355.05	73.47
75	55.00	14.77	45.27	21.75	11.14	73.04	24.31	60.95	828.81	225.85	34.11	1089.57	244.59
75	56.00	100.19	274.96	0.00	0.00	0.00	0.00	437.06	4909.11	0.00	0.00	0.00	0.00
75	57.00	157.34	443.43	27.55	7.85	35.08	27.01	645.70	8002.77	183.36	38.81	689.67	225.79
75	58.00	109.81	314.31	5.27	2.35	19.93	5.41	439.17	5691.43	41.69	6.85	290.90	53.15
75	59.00	146.36	415.04	319.55	710.52	772.00	402.13	629.78	7702.15	1520.71	7296.97	14487.48	1760.56
76	60.00	79.31	223.52	205.39	414.69	511.69	249.14	313.87	4133.30	1142.62	4205.61	9527.02	1255.80
76	61.00	173.21	509.92	10.78	5.04	42.69	11.41	640.77	9255.28	90.66	14.18	624.85	111.69
76	62.00	280.33	782.13	0.00	0.00	0.00	0.00	1085.66	14013.58	0.00	0.00	0.00	0.00
76	63.00	196.45	592.85	12.29	7.15	56.64	14.50	908.57	10935.75	122.21	36.82	864.14	118.48
76	64.00	274.47	749.44	652.39	234.41	939.16	654.68	1249.96	13630.75	5163.04	1458.52	17656.78	4470.00
76	65.00	72.93	225.00	336.61	287.98	1302.92	419.63	288.29	4205.75	3306.53	1794.43	21252.00	3156.40
76	66.00	343.69	913.66	51.06	20.63	140.77	46.39	1290.03	17013.58	437.92	99.86	2308.16	370.58
76	67.00	151.51	393.85	114.30	45.26	330.99	96.23	547.78	7365.59	993.46	223.43	5001.61	781.26
76	68.00	160.75	419.34	0.00	0.00	0.00	0.00	717.59	7715.65	0.00	0.00	0.00	0.00
76	69.00	116.66	338.50	237.68	125.84	799.37	245.24	374.76	6525.41	2594.68	430.62	12047.97	2003.41
77	70.00	0.89	2.85	176.73	109.56	632.89	247.61	2.53	55.85	2092.52	485.09	10249.53	1929.06

Cumulative (2045) Plus Project

Z	PROD_HBW	PROD_HBO	PROD_NHB	ATTR_HBW	ATTR_HBO	ATTR_NHB	VMTP_HBW	VMTP_HBO	VMTP_NHB	VMTA_HBW	VMTA_HBO	VMTA_NHB
750.00	391.69	1091.94	44.33	21.62	116.90	39.08	1546.36	19361.71	325.98	68.46	1677.19	371.34
751.00	123.35	322.40	10.88	3.07	13.31	9.50	529.46	6044.30	75.60	14.54	262.14	69.97
752.00	205.38	528.65	0.00	0.00	0.00	0.00	816.97	9795.57	0.00	0.00	0.00	0.00
753.00	148.77	408.23	0.00	0.00	0.00	0.00	622.95	7650.73	0.00	0.00	0.00	0.00
754.00	192.89	539.89	7.90	3.07	25.68	7.23	912.08	9688.70	63.71	9.92	354.98	73.46
755.00	14.77	45.27	21.75	11.11	73.04	24.30	60.83	828.73	225.85	34.15	1089.58	244.57
756.00	100.18	274.94	0.00	0.00	0.00	0.00	435.85	4908.47	0.00	0.00	0.00	0.00
757.00	157.24	443.39	27.55	7.85	35.07	27.00	640.24	8001.70	183.33	38.81	689.50	225.76
758.00	109.68	314.28	5.27	2.34	19.93	5.41	433.81	5690.70	41.68	6.83	290.90	53.17
759.00	145.92	414.31	326.60	791.58	803.81	411.35	620.28	7689.17	1575.10	7550.34	15112.26	1818.27
760.00	79.23	223.48	205.35	414.19	511.54	249.06	309.04	4132.45	1142.11	4205.59	9524.29	1255.41
761.00	173.11	509.86	10.78	5.02	42.68	11.41	635.51	9253.85	90.65	14.16	624.72	111.68
762.00	280.15	782.04	0.00	0.00	0.00	0.00	1067.22	14011.74	0.00	0.00	0.00	0.00
763.00	196.30	592.78	12.29	7.13	56.64	14.49	893.77	10934.23	122.24	36.75	864.16	118.45
764.00	274.21	749.35	652.26	234.31	938.83	654.51	1226.17	13628.69	5162.02	1458.13	17650.98	4468.95
765.00	72.89	224.99	336.51	287.08	1302.80	419.54	283.93	4205.37	3305.54	1792.82	21249.98	3155.83
766.00	343.40	913.57	51.05	20.58	140.76	46.38	1262.34	17011.43	437.99	99.71	2307.95	370.52
767.00	151.44	393.81	114.29	44.99	330.96	96.20	540.66	7364.59	993.42	222.21	5001.20	781.15
768.00	160.59	419.29	0.00	0.00	0.00	0.00	696.77	7714.60	0.00	0.00	0.00	0.00
769.00	116.59	338.48	237.63	125.27	799.32	245.18	372.60	6524.67	2594.48	429.03	12047.13	2003.21
770.00	0.89	2.85	176.66	109.18	632.82	247.55	2.51	55.84	2091.81	483.84	10248.18	1928.89