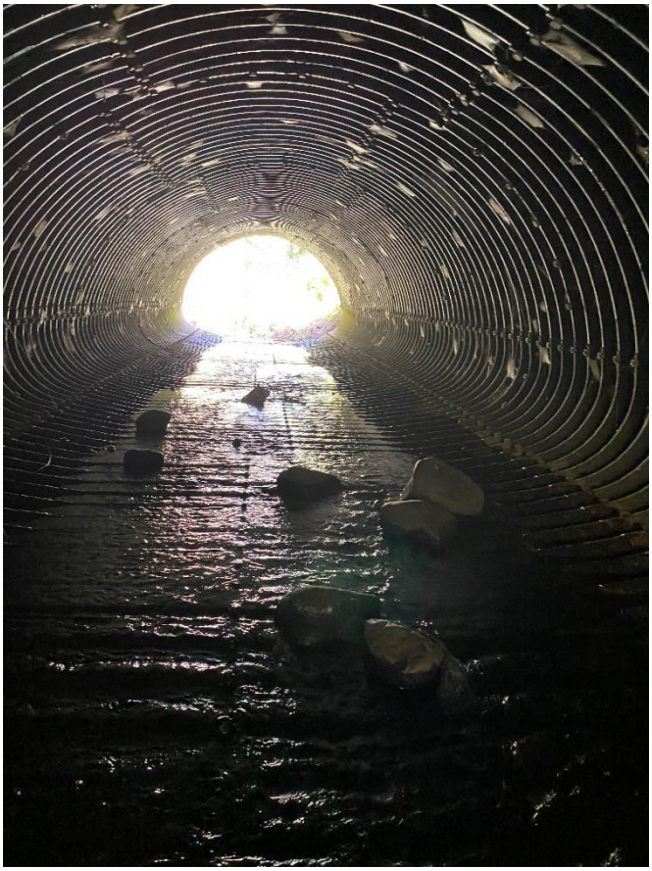
CARLOTTA SHOULDER WIDENING PROJECT

INITIAL STUDY

with Mitigated Negative Declaration



HUMBOLDT COUNTY, CALIFORNIA

DISTRICT 1–HUM–36 Post Miles 3.90 to 6.00

EA 01-0J890 / EFIS 01-1900-0119

Prepared by the
State of California Department of Transportation

April 2023

General Information About This Document

What is in this document?

The California Department of Transportation (Caltrans) has prepared this Initial Study with Mitigated Negative Declaration (IS/MND) which examines the potential environmental effects of the proposed project on State Route 36 in Humboldt County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the project is being proposed, how the existing environment could be affected by the project, the potential impacts of the project, and proposed avoidance, minimization, and/or mitigation measures.

The IS/MND circulated to the public between September 22 and October 23, 2022. A hybrid public meeting, consisting of an in-person meeting with virtual access, took place at Cuddeback Elementary School on September 28, 2022. Comments received during this period are included with responses in Appendix G.

Throughout this document, a vertical line in the margin indicates a change made after document circulation. Minor editorial changes and clarifications have not been marked. Additional copies of this document and the related technical studies are available for review at the Caltrans District 1 Office. This document may be downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-1/d1-projects/carlottashoulderwidening.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Myles Cochrane, North Region Environmental-District 1, PO Box 3700, Eureka, CA 95502-3700; (707) 498-4272 Voice, or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech) or 711.

CARLOTTA SHOULDER WIDENING PROJECT

Widen the shoulders and improve fish passage on State Route 36 in Humboldt County, from Post Miles 3.90 to 6.00 west of Carlotta, CA

INITIAL STUDY

With Mitigated Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

4/19/2023
Date of Approval

Liza Walker
Liza Walker, Acting Office Chief
North Region Environmental–District 1
California Department of Transportation
CEQA Lead Agency

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MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, California Public Resources Code

SCH Number: 2022090418

Project Description

The California Department of Transportation (Caltrans) proposes to widen the shoulders and improve fish passage on State Route 36 in Humboldt County, from Post Miles 3.90 to 6.00 west of Carlotta, California.

Determination

This Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt an MND for this project. This does not mean that Caltrans' decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, following public review, has determined from this study that the proposed project would not have a significant impact on the environment for the following reasons:

The project would have *No Effect* on:

- Air Quality
- Cultural Resources
- Energy
- Geology and Soils
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

The project would have *Less than Significant Impacts* to:

- Aesthetics
- Agriculture and Forest Resources
- Greenhouse Gas Emissions
- Hydrology and Water Quality

With the following mitigation measures incorporated, the project would have *Less than Significant Impacts* to Biological Resources.

- Mitigation for permanent impacts to wetlands would be implemented by applying credits from the Fen Parcel Agreement.

Liza Walker _____ 4/19/2023

Liza Walker, Acting Office Chief
North Region Environmental–District 1
California Department of Transportation

Date

Table of Contents

List of Appendices

List of Figures

List of Tables

List of Acronyms and Abbreviated Terms

Acronym/Abbreviation	Description
AB	Assembly Bill
ABC	Accelerated Bridge Construction
APC	Alternative Pipe Culvert
ARB	Air Resources Board
BMPs	Best Management Practices
BO	Biological Opinion
BSA	Biological Study Area
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CAL-CET	Caltrans Construction Emissions Tool
CAL EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CAL-IPC	California Invasive Plant Council
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAPTI	Climate Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CC	California Coastal (Chinook salmon ESU)
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CIA	Cumulative Impact Analysis
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CRPR	California Rare Plant Rank
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
Department	Caltrans / Department of Transportation
dbh	diameter-at-breast height

Acronym/Abbreviation	Description
DOT	Department of Transportation
DPS	Distinct Population Segment
ECL	Environmental Construction Liaison
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EO(s)	Executive Order(s)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESL	Environmental Study Limits
ESU	Evolutionarily Significant Unit
ºF	degrees Fahrenheit
FED	Final Environmental Document
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FR	Federal Register
FYLF	Foothill yellow-legged frog
G	Global: ranking for Sensitive Natural Communities
GHG	greenhouse gas
GWP	Global Warming Potential
H&SC	Health & Safety Code
HCAOG	Humboldt County Association of Governments
HFCs	hydrofluorocarbons
IPaC	Information for Planning and Conservation
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
IS/MND	Initial Study / Mitigated Negative Declaration
IUCN	International Union for Conservation of Nature
LESA	Land Evaluation & Site Assessment (Model)
LCFS	low carbon fuel standard
MAMU	Marbled murrelet
MBGR	Metal Beam Guardrail
MBTA	Migratory Bird Treaty Act
MGS	Midwest Guardrail System
MLD	Most Likely Descendent
MMT	million metric tons
MMTC0_2e	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MPO	Metropolitan Planning Organization
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MTP	Metropolitan Transportation Plan

Acronym/Abbreviation	Description
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NC	North Coast
NC	Northern California
NCRWQCB	North Coast Regional Water Quality Control Board
NCSC	Natural Communities of Special Concern
ND	Negative Declaration
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHTSA	National Highway Traffic and Safety Administration
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRLF	Northern red-legged frog
NSO	Northern spotted owl
NWI	National Wetlands Inventory
OPR	Governor's Office of Planning and Research
PBO	Programmatic Biological Opinion
PDT	Project Development Team
PG&E	Pacific Gas & Electric Company
PLOC	Programmatic Letter of Concurrence
PM(s)	post mile(s)
ppt	parts per thousand
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PRC	Public Resources Code (California)
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
S	State: ranking for Sensitive Natural Communities
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SLR	Sea Level Rise
SNC(s)	Sensitive Natural Community(ies)
SONCC	Southern Oregon/Northern California Coast (coho salmon)
SR	State Route

Acronym/Abbreviation	Description
SRA	State Responsibility Area
SSC	Species of Special Concern
SSPs	Standard Special Provisions
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
THPO	Tribal Historic Preservation Officer
THVF	Temporary High Visibility Fencing
TMDLs	Total Maximum Daily Loads
TMP	Transportation Management Plan
U.S. or US	United States
U.S. 101	U.S. (United States) Highway 101
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United State Department of Agriculture
U.S. DOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
VA	Value Analysis
VIA	Visual Impact Assessment
VMS	Value Management Strategies
VMT	Vehicle Miles Traveled
VROOM	Variety in Rural Options of Mobility
WDRs	Waste Discharge Requirements
WPCP	Water Pollution Control Program

Chapter 1. Proposed Project

1.1 Project History

The Carlotta Shoulder Widening Project (project) was initiated in response to a traffic investigation report. The collision data determined that the segment of State Route (SR) 36 from post miles (PMs) 3.0 to 6.0 experienced 31 total collisions between January 1, 2013, and December 31, 2017. Seven fatalities and 16 injuries resulted from these documented collisions.

A public meeting was held on September 28, 2022, with attendees in person at Cuddeback Elementary and online via video streaming. In addition, there have been on-site meetings and email interactions between project delivery staff and property owners to address concerns about hydrological issues, safety, and project improvement impacts to individual landowners. Responses to public comments received during circulation of the Draft Environmental Document are available in Appendix G of this document.

The Department of Transportation (Caltrans) is the lead agency under the California Environmental Quality Act (CEQA).

1.2 Project Description

The California Department of Transportation (Caltrans) proposes a project on State Route 36 (SR 36), between post miles (PMs) 3.90 and 6.00 (Figures 1 and 2), near the community of Carlotta in Humboldt County, California. The proposed project would widen the shoulders of SR 36 in several narrow areas, extend the westbound passing and climbing lane, build a bridge with wide shoulders over Ward Creek, and construct an eastbound maintenance turnout. New shoulder and centerline sinusoidal rumble strips are proposed. Guardrail would be added or updated as needed.

Primary safety features for this project include extending the westbound passing and climbing lane, shoulder widening, and constructing an eastbound turnout. The new bridge over Ward Creek would have 10-foot-wide shoulders in addition to three lanes—two westbound and one eastbound. Existing Metal Beam Guardrail (MBGR) would be replaced with Midwest Guardrail System (MGS). New segments of MGS are proposed over Barber Creek, along the westbound passing lane extension, and adjacent to Wilson Creek. Lastly, the location of an existing eastbound radar feedback sign (at PM 5.90) would be moved approximately 0.05 mile west to PM 5.85.

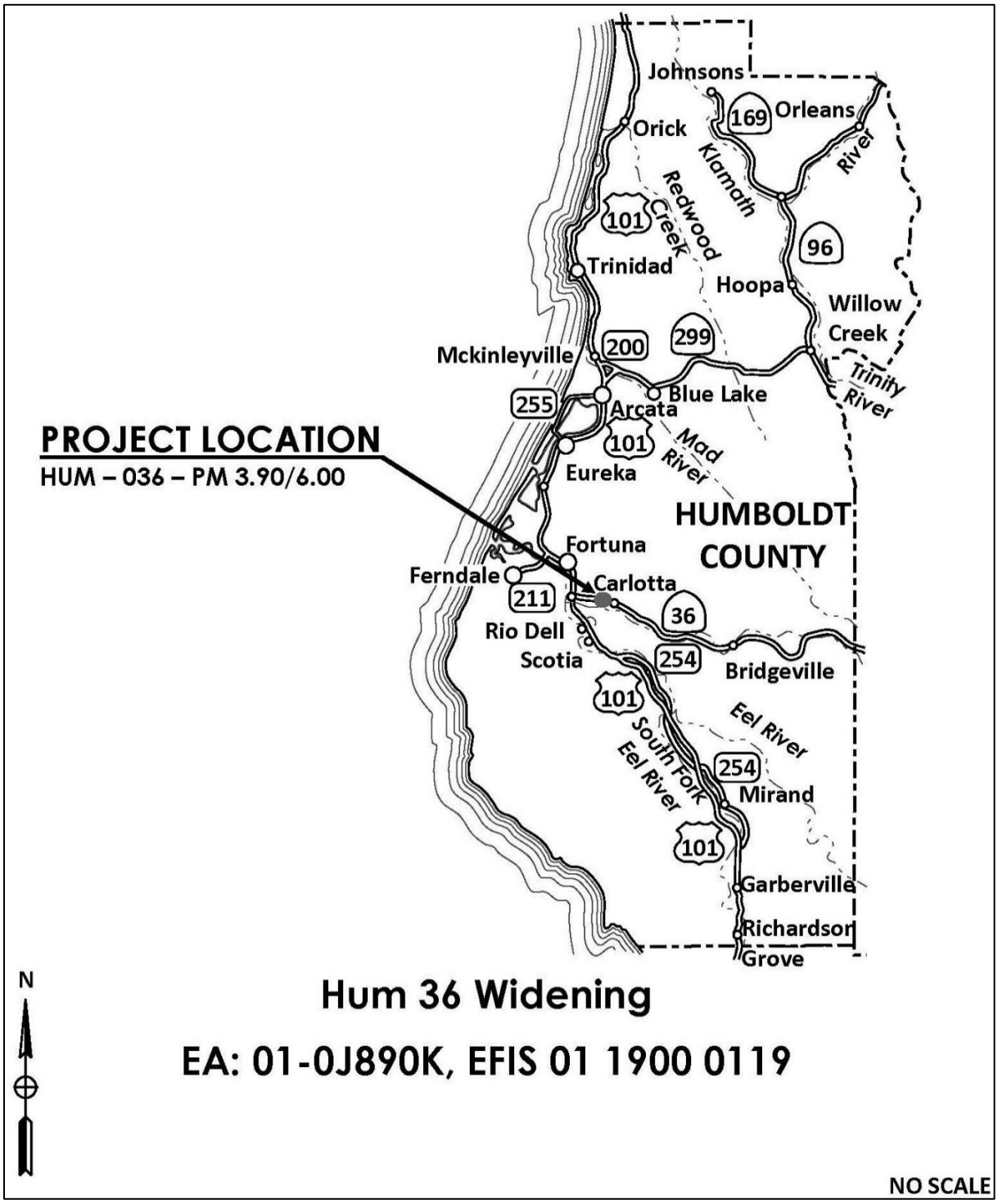

Figure 1. **Project Vicinity**

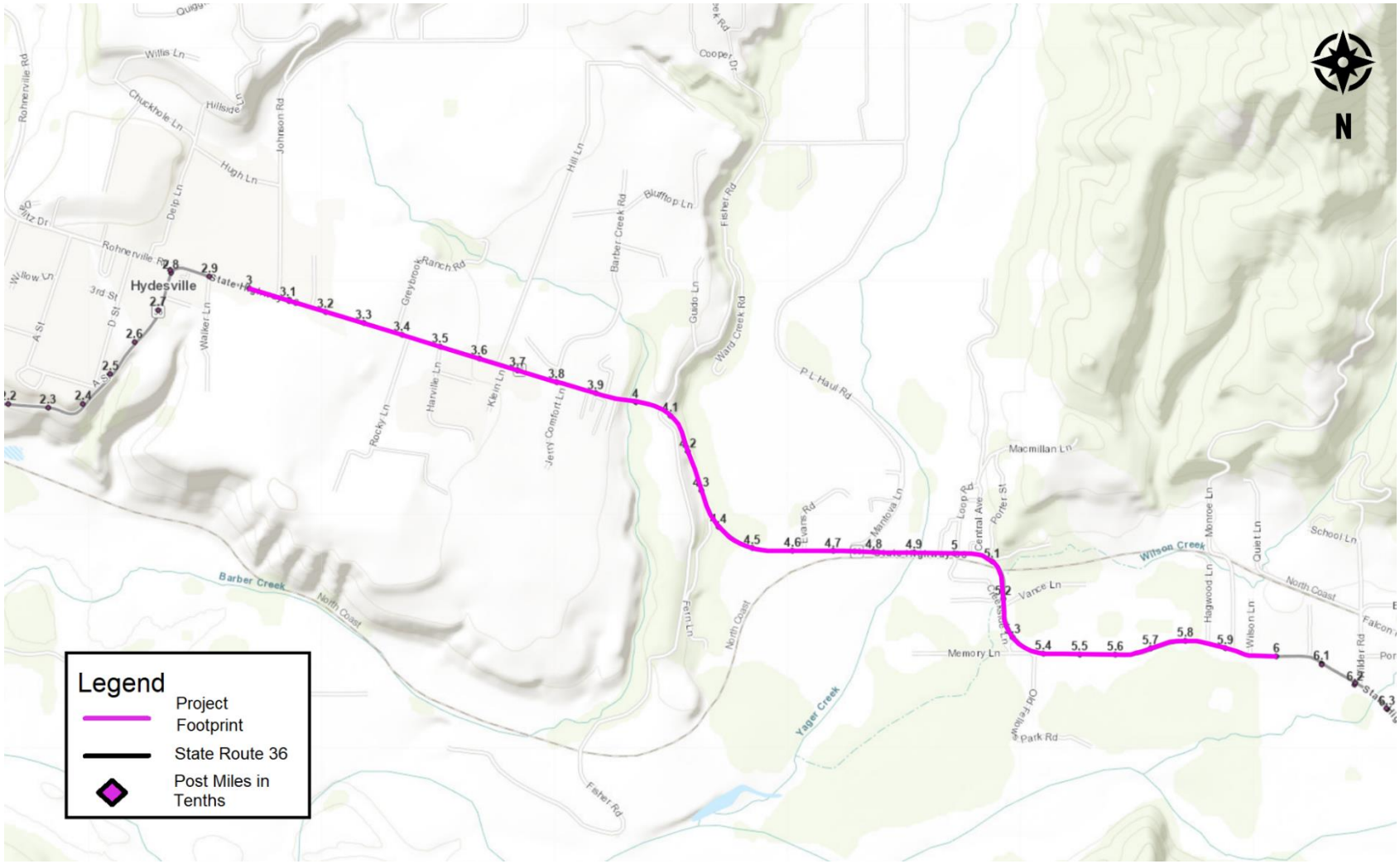

Figure 2. Project Location Map

Project Objective

Purpose

The purpose of this project is to reduce the frequency and severity of collisions.

Need

This segment of highway experiences a higher rate of collisions than the statewide average. Some of the collisions have resulted in injuries or fatalities.

Existing Condition

State Route 36 is the primary east-west lifeline corridor connecting coastal Humboldt County along U.S. Highway 101 (U.S. 101) to inland rural communities scattered throughout Shasta, Trinity, Tehama, Lassen, and Plumas counties, the town of Susanville, as well as through-traffic or visitors along the route. This section of SR 36 also serves the community of Carlotta as a facilitator of local commerce and transporter of resources in and out of the region.

Right of way width varies between 30 and 100 feet from the existing centerline of the route. Private and state-owned fencing runs along the route's right of way within the project limits. A 205-foot-wide timber pile and lagging wall, located near Barber Creek at approximately PM 3.99, was constructed in 1982 to contain the roadway fill prism.

Several utilities, such as electrical, gas, communications, and a water main, exist within the project limits as shown on project layouts in Appendix A.

Within the project limits are 10 culverts, two segments of MBGR, and one radar feedback sign in the eastbound direction. The route crosses four named watercourses: Barber, Ward, Wilson, and Yager creeks.

There are eight curves through the project length, some of which provide insufficient sight distance, in addition to varied shoulder widths, which are less than one foot in some locations within the project footprint. Most of the roadway is flexible pavement in fair condition.

There is a westbound passing lane between PM 4.15 and PM 4.31.

Proposed Project

Structures

Structural features for the project include replacing a 10-foot-wide x 60-foot-long culvert with a single span bridge at Ward Creek (PM 4.39). California Senate Bill No. 857 (SB 857) requires projects be constructed without presenting barriers to fish passage. The new bridge would ensure the primary safety features of the project can be constructed in compliance with SB 857.

The purpose of the proposed new Ward Creek Bridge would be to accommodate a widened highway that would include the westbound passing lane extension and shoulder widening, and would eliminate barriers to fish passage. The proposed bridge would be 60 feet wide with a span of 45 feet.

This bridge would accommodate three 12-foot-wide lanes (eastbound, westbound, and westbound passing), two 10-foot-wide shoulders, and would include a vehicular and bicycle bridge rail. The most likely type of bridge deck would be a pre-cast/pre-stressed concrete slab with a depth of 1 foot 9 inches. The bridge type would be determined during the final design phase. Pile driving would likely be required to install the new pre-cast abutments.

The corner sight distance at Fisher Road is expected to be improved with the proposed eastbound shoulder widening, grading, and clearing and grubbing activities. This is the beginning of the shoulder widening for the project, which would extend eastward to PM 6.0. Additional grading, clearing, and grubbing to improve the sight distance at this intersection would be incorporated into the project.

Realignment, Road Surface, and Right of Way

A slight improvement to the curve radius and superelevation would occur at the Ward Creek curve approximately located between PM 4.32 and PM 4.60, which would shift the centerline approximately seven feet to the north. Upon completion of construction, the extended westbound passing lane, located between PM 4.31 and PM 4.79, would be 12 feet wide and 3,700 feet long.

A minor highway realignment is proposed between PM 5.60 and PM 5.96, with a maximum offset of 6.1 feet from the existing centerline. At this location, the adjacent roadside consists of a small area of unpaved shoulder. The existing alignment also includes four curves, two of which make up a compound curve (also called an “S” curve). The proposed alignment would include three curves, eliminating the existing compound curve. A new eastbound

turnout is proposed near PM 5.61. The proposed turnout would be 400 feet long by 15 feet wide.

The existing eastbound radar speed feedback sign located at PM 5.90 is proposed to be removed. A new radar feedback sign would be installed at PM 5.85 in conjunction with the existing 45 mile per hour (mph) sign at the beginning of the speed zone at PM 5.85. A maintenance vehicle pullout to service the sign would be included in the final project design. Additionally, in cooperation with the Humboldt Regional Bicycle Plan, "Share the Road" signage would be included in this project (Humboldt County Association of Governments [HCAOG] 2018).

On existing route segments where structures would not be constructed, a 0.10-foot-thick pavement overlay of hot mix asphalt would be placed from edge of pavement to edge of pavement. The full-width overlay would provide a clean surface for the new pavement markings, construction of proper slopes, and ensure the hydraulic characteristics are the same over the pavement surface.

Right-of-way acquisition for this project would be approximately 2.48 acres. Approximately 10 temporary construction easements for a total of 0.92 acre would also be required.

Hydraulics and Environmental

Hydraulic components of the project would include:

- remove driveway cross-culvert and replace with a 24-inch-diameter culvert (approximately PM 4.36)
- remove an existing structural plate pipe arch culvert (6-foot 10-inch-tall with a length of 60 feet and a width of 10-foot 8-inches) and replace with a new Ward Creek single span bridge (PM 4.39)
- install a new headwall and extend existing culvert at approximately PM 4.60
- replace a double barrel 24-inch-diameter corrugated metal pipe culvert in-kind (PM 5.29)
- extend the existing 24-inch culvert at PM 5.60
- remove an existing 18-inch-diameter concrete culvert and replace with a 24-inch-diameter Alternative Pipe Culvert (APC) (PM 5.90)

The new bridge at Ward Creek (at PM 4.39) would include features to improve wildlife passage under the highway. The project would also include in-stream restoration work for fish passage in Ward Creek. The proposed stream channel restoration work at Ward Creek would extend an estimated 50 feet upstream and 160 feet downstream of the new bridge.

Additionally, an old bridge, located approximately 100 feet downstream of the current alignment, was relinquished to a private property owner prior to 1970. This bridge would be demolished and removed. The creek area would be recontoured and revegetated to reduce erosion, and to enhance riparian and aquatic habitat.

Tree removal would occur at several locations within the project limits:

- Tree removal is proposed along the corridor between Fisher Road and SR 36. Approximately 52 small redwood trees, ranging from 0.4 feet to 2.5 feet DBH, with an approximate area of 0.28 acre, would be removed between PMs 4.15 and 4.35. There are no redwoods with a DBH greater than 3.0 feet proposed for removal at this location. All trees proposed for removal are immediately adjacent to the highway.

- Two redwood trees greater than 3 feet diameter at breast height (DBH) would be removed from the northwest bank of Ward Creek to accommodate the facility widening and new bridge. An additional six redwood trees under 3 feet DBH, five big leaf maples, and three alder trees would be removed south of SR 36 at Ward Creek to accommodate the old bridge removal.

- Approximately 22 black cottonwood trees (with a DBH ranging from 0.8' to 4.0'), accounting for approximately 0.07 acre, would be removed from the south side of SR 36 between PMs 5.60 and 5.90. Updated tree removal at this location also includes a big leaf maple, an alder, and a willow.

Equipment List

The following equipment would typically be used in construction of the project:

- Excavator
- Pile driving rig
- Crane with driving attachment
- Backhoe
- Front-end loader
- Air compressor (jack hammer)

- Vibratory compactor

No-Build Alternative

The No-Build Alternative would maintain the facility in its current condition and would not meet the purpose and need of the project. For each potential impact area discussed in Chapter 2, the No-Build Alternative has been determined to have no impact. Under the No-Build Alternative, no alterations to the existing conditions would occur and the proposed improvements would not be implemented.

Alternatives Considered but Eliminated from Further Consideration

A Value Analysis (VA) study was conducted in April 2022 (Caltrans and Value Management Strategies [VMS] 2022). The VA team identified seven alternatives for cost and schedule savings (Table 1) and recommended five strategies be considered for adoption (Table 2). The Project Development Team (PDT) discussed the recommended improvements and identified the preferred strategies, with modifications.

Table 1. Alternatives Developed During Value Analysis

Alternative Number and Description	Initial Cost Difference	Change in Schedule
1.1 *Construct a precast open-bottom arch structure, e.g. Contech* (instead of precast/prestressed voided slab bridge with cast-in-place abutments and wingwalls)	$3,210,000 savings	4-month reduction
1.2 *Install two precast concrete box culverts* (instead of precast/prestressed voided slab bridge with cast-in-place abutments and wingwalls)	$2,650,000 savings	4-month reduction
1.3 *Construct a voided slab bridge with all precast structural elements* (instead of precast/prestressed voided slab bridge with cast-in-place abutments and wingwalls)	$630,000 savings	1-month reduction
2.0 *Construct 4-foot-wide shoulders* (instead of 6-foot-wide shoulders)	$320,000 savings	No change
3.0 *Use metal-beam guardrail retaining walls to increase shoulder width*	$10,000 increase	No change
4.0 *Widen shoulder to provide two maintenance vehicle pullouts and one school bus stop in Carlotta*	$120,000 increase	No change
5.0 *Combine signs/striping/markings with plant installation during construction.*	$150,000	0.5-month reduction

The project would incorporate two new strategies as a result of the Value Analysis.

- Alternative 1.3: The bridge, abutments, and wingwalls would all be precast.
- Alternative 4.0: One vehicle turnout would be added to the project. This alternative was modified because the VA team was unaware of the turnout already in the scope. In addition, the location for a school bus stop was not within the project limits. The bus stop would be considered in another project.

Five strategies were eliminated from consideration.

- Alternative 1.1: The PDT concurred that this alternative would be difficult to adopt due to the project schedule. Caltrans has only approved proprietary structures (e.g., Contech) for less than 20 feet in length, and the special approval time would exceed the project delivery schedule.
- Alternative 1.2: The PDT concluded that this alternative may not rate as favorably for fish passage as other alternatives. This option could also present debris catchment issues.
- Alternative 2.0: The PDT decided that this exception to design standards would likely not be granted because it would not support the safety components of the project.
- Alternative 3.0: The PDT determined that rail element walls would not be approved for a shoulder widening project.
- Alternative 5.0: The PDT determined that this alternative would not be practical because the two tasks would be completed by two separate contractors.

The PDT's recommendations were sent to Executive Staff for their concurrence on June 24, 2022, and the strategies were approved on August 5, 2022 (Table 2). The total cost savings would be $510,000 and would reduce the project schedule by one month.

Table 2. Summary of Value Analysis Strategies

Strategy Description	Initial Cost Savings	Change in Schedule
Recommended Strategy Alternatives 1.1, 2.0, 3.0, 4.0, and 5.0	$3,500,000	4.5-month reduction
Approved Strategy Alternatives 1.3 and 4.0, with modifications	$ 510,000	1 -month reduction

General Plan Description, Zoning, and Surrounding Land Uses

The proposed project is located in a rural area of Humboldt County, approximately 3.9 miles east of U.S. 101. This portion of SR 36 is characterized by agricultural land, residential parcels, streams, and riparian vegetation. Large-scale timber harvest occurs on private land north and south of the project area (County of Humboldt 2017a).

The project would be within the boundaries of the designated Carlotta–Hydesville Community Area Plan, also known as the Inland Community Plan (County of Humboldt 2017b). The Area Plan and the Web GIS Portal note several land uses within the project footprint:

- Resource Production
    - Agriculture Exclusive (AE)
    - Residential Low Density (RL)
    - Residential Estates (RE 2.5-5)
    - Mixed Use (MU)
    - Commercial (CG)
    - Industrial (IG)

1.3 Permits and Approvals Needed

The following table indicates the permitting agency, permits/approvals, and status of permits required for the project.

Table 3. Permits/Approvals and Status

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	1602 Lake or Streambed Alteration Agreement	Application to be submitted after Final Environmental Document
North Coast Regional Water Quality Control Board (NCRWQCB)	401 Certification	Application to be submitted after Final Environmental Document
U.S. Army Corps of Engineers (USACE)	404 Notification	Application to be submitted after Final Environmental Document
U.S. Fish and Wildlife Service (USFWS)	Programmatic Letter of Concurrence	Concurrence received on January 5, 2022
National Marine Fisheries Service (NMFS)	Section 7 Formal Consultation and Biological Opinion	Biological Opinion was signed on March 24, 2023.
United States Department of Agriculture	No Effect on Prime Agriculture	Concurrence received on February 17, 2022
North Coast Unified Air Quality Management District	National Emission Standards for Hazardous Air Pollutants Notification	Notification to be included in specification package

1.4 Standard Measures and Best Management Practices Included in All Alternatives

Under CEQA, "mitigation" is defined as avoiding, minimizing, rectifying, reducing/ eliminating, and compensating for an impact. In contrast, Standard Measures and Best Management Practices (BMPs) are prescriptive and sufficiently standardized to be generally applicable, and do not require special tailoring for a project. These are measures that typically result from laws, permits, agreements, guidelines, resource management plans and resource agency directives and policies, predate the project's proposal, and apply to all similar projects. For this reason, the measures and practices are not considered "mitigation" under CEQA; rather, they are included as part of the project description in environmental documents.

The following section provides a list of project features, standard practices (measures), and Best Management Practices (BMPs) that are included as part of the project description. As these measures and practices do not qualify as project mitigation, the effects of the project are analyzed with these measures in place. Any project-specific avoidance, minimization, or mitigation measures that would be applied to reduce the effects of project impacts are listed in Chapter 2.4—Biological Resources.

Standard measures relevant to the protection of natural resources deemed applicable to the proposed project include:

Aesthetics Resources

AR-1: Aesthetic treatment to bridges/guardrails/retaining walls would[1] be included, such as tribal patterns, to address context sensitivity.

AR-2: Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally-appropriate native vegetation.

AR-3: Where feasible, guardrail terminals would be buried; otherwise, an appropriate terminal system would be used, if appropriate.

AR-4: Where feasible, construction lighting would be limited to within the area of work.

AR-5: Where feasible, the removal of established trees and vegetation would be minimized. Temporary High Visibility Fencing (THVF) would be installed in environmentally sensitive areas before start of construction to demarcate areas where vegetation would be preserved and root systems of trees protected.

Biological Resources

BR-1: **General**

Before start of work, as required by permit or consultation conditions, a Caltrans biologist or Environmental Construction Liaison (ECL) would meet with the contractor to brief them on environmental permit conditions and requirements relative to each stage of the proposed project, including, but not limited to, work windows, drilling site management, and how to identify and report regulated species within the project areas.

[1] Given a project is only proposed until a contract is awarded, in environmental documents (including technical studies) "would" should be used instead of "will".

BR-2: Animal Species

A. To protect migratory and nongame birds (occupied nests and eggs), if possible, vegetation removal would be limited to the period outside of the bird breeding season (removal would occur between September 16 and January 31). If vegetation removal is required during the breeding season, a nesting bird survey would be conducted by a qualified biologist within one week prior to vegetation removal. If an active nest is located, the biologist would coordinate with CDFW to establish appropriate species-specific buffer(s) and any monitoring requirements. The buffer would be delineated around each active nest and construction activities would be excluded from these areas until birds have fledged, or the nest is determined to be unoccupied.

B. A Bird Exclusion Plan would be prepared by a qualified biologist prior to construction. Exclusion devices would be designed so they would not trap or entangle birds or bats. Exclusion devices would be installed outside of the breeding season (September 16 through January 31) to eliminate the re-occupancy of existing structures by migratory bird species that may attempt to nest on the structure during construction. On structures or parts of structure where it is not feasible to install bird exclusion devices, partially constructed and unoccupied nests within the construction area would be removed and disposed of on a regular basis throughout the breeding season (February 1 through September 15 with biologist discretion) to prevent their occupation. Nest removal would be repeated weekly under guidance of a qualified biologist to ensure nests are inactive prior to removal.

C. Pre-construction surveys for active raptor nests within one-quarter mile of the construction area would be conducted by a qualified biologist within one week prior to initiation of construction activities. Areas to be surveyed would be limited to those areas subject to increased disturbance because of construction activities (i.e., areas where existing traffic or human activity is greater than or equal to construction-related disturbance need not be surveyed). If any active raptor nests are identified, appropriate conservation measures (as determined by a qualified biologist) would be implemented. These measures may include, but are not limited to, establishing a construction-free buffer zone around the active nest site, biological monitoring of the active nest site, and delaying construction activities near the active nest site until the young have fledged.

D. A Bat Exclusion Plan would be prepared by a qualified biologist prior to construction. Exclusion devices would be designed so they would not trap or entangle bats or birds. The Bat Exclusion Plan would include guidelines for appropriate date of exclusion and temperature parameters based on bridge type, geographic location, and species present. At the direction of a qualified biologist, exclusion devices would be installed after the maternity season but before hibernation. If overlapping resources are present (e.g., nesting birds), coordination between the Bat Exclusion Plan and any other relevant plans would occur. Measures would be monitored by a qualified biologist.

E. To prevent attracting corvids (birds of the *Corvidae* family which include jays, crows, and ravens), no trash or foodstuffs would be left or stored on-site. All trash would be deposited in a secure container daily and disposed of at an approved waste facility at least once a week. Also, on-site workers would not attempt to attract or feed any wildlife.

F. Hydroacoustic monitoring would occur during activities such as impact pile driving, hoe ramming, or jackhammering which could potentially produce impulsive sound waves that may affect listed fish species. Hydroacoustic monitoring would comply with the terms and conditions of federal and state Endangered Species Act consultations.

   The Hydroacoustic Monitoring Plan would describe the monitoring methodology, frequency of monitoring, positions that hydrophones would be deployed, techniques for gathering and analyzing data, quality control measures, and reporting protocols.

   To reduce potential hydroacoustic impacts to anadromous species due to impact pile driving, a sound-attenuation system may be implemented. The sound attenuation system would be used for piles installed in water by impact hammer. If the sound attenuation system fails, pile driving would stop immediately and not resume until the system is operational. Types of sound attenuation system include, but are not limited to:

   a) Confined bubble curtain
   b) Unconfined bubble curtain
   c) Isolation casings

G. A qualified biologist would monitor in-stream construction activities that could potentially impact sensitive biological receptors (e.g., amphibians/reptiles). The biological monitor would be present during activities such as installation and removal of dewatering or diversion systems, bridge demolition, pile-driving and hoe-ramming, and drilling for bridge foundations to ensure adherence to permit conditions. In-water work restrictions would be implemented.

H. An Aquatic Species Relocation Plan, or equivalent, would be prepared by a qualified biologist and include provisions for pre-construction surveys and the appropriate methods or protocols to relocate any species found. If previously unidentified threatened or endangered species are encountered or anticipated incidental take levels are exceeded, work would either be stopped until the species is out of the impact area, or the appropriate regulatory agency would be contacted to establish steps to avoid or minimize potential adverse effects. This Plan may be included as part of the Temporary Creek Diversion System Plan identified in **BR-5**.

I. Artificial night lighting may be required. To reduce potential disturbance to sensitive resources, lighting would be temporary, and directed specifically on the portion of the work area actively under construction. Use of artificial lighting would be limited to Cal/OSHA work area lighting requirements.

J. A Limited Operating Period would be observed, whereby all in-stream work below ordinary high water would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species.

K. Sinusoidal rumble strips would be installed in place of traditional rumble strips to reduce potential auditory disturbance to sensitive animal species, as approved by District Traffic Safety.

BR-3: Invasive Species

Invasive non-native species control would be implemented. Measures would include:

- Straw, straw bales, seed, mulch, or other material used for erosion control or landscaping which would be free of noxious weed seed and propagules.
- All equipment would be thoroughly cleaned of all dirt and vegetation prior to entering the job site to prevent importing invasive non-native species. Project personnel would adhere to the latest version of the *California Department of Fish and Wildlife Aquatic Invasive Species Cleaning/Decontamination Protocol (Northern Region)* for all field gear and equipment in contact with water (CDFW 2016).

BR-4: Plant Species and Sensitive Natural Communities

A. Seasonally appropriate, pre-construction surveys for sensitive plant species would be completed (or updated) by a qualified biologist prior to construction in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009).

B. A Revegetation Plan would be prepared which would include a plant palette, establishment period, watering regimen, monitoring requirements, and pest control measures. The Revegetation Plan would also address measures for wetland and riparian areas temporarily impacted by the project.

C. Prior to the start of work, Temporary High Visibility Fencing (THVF) and/or flagging would be installed around sensitive natural communities, environmentally sensitive habitat areas, rare plant occurrences, intermittent streams, and wetlands and other waters, where appropriate. No work would occur within fenced/flagged areas.

D. Where feasible, the structural root zone would be identified around each large-diameter tree (>2-foot DBH) directly adjacent to project activities, and work within the zone would be limited.

E. When possible, excavation of roots of large diameter trees (>2-foot DBH) would not be conducted with mechanical excavator or other ripping tools. Instead, roots would be severed using a combination of root-friendly excavation and severance methods (e.g., sharp-bladed pruning instruments or chainsaw). At a minimum, jagged roots would be pruned away to make sharp, clean cuts.

F. After completion, all superfluous construction materials would be completely removed from the site. The site would then be restored by regrading and stabilizing with a hydroseed mixture of native species along with fast growing sterile erosion control seed, as required by the Erosion Control Plan.

BR-5: Wetlands and Other Waters

A. Prior to any creek diversion, the contractor would be required to prepare and submit a Temporary Creek Diversion System Plan to Caltrans for approval. Depending on-site conditions, the plan may also require specifications for the relocation of sensitive aquatic species (see also Aquatic Species Relocation Plan in **BR-2**). Water generated from the diversion operations would be pumped and discharged according to the approved plan and applicable permits.

B. In-stream work would be restricted to the period between June 15 and October 15 to protect water quality and vulnerable life stages of sensitive fish species (see also **BR-2L**). Construction activities restricted to this period include any work below the ordinary high water. Construction activities performed above the ordinary high water mark of a watercourse that could potentially directly impact surface waters (i.e., soil disturbance that could lead to turbidity) would be performed during the dry season, typically between June through October, or as weather permits per the authorized contractor-prepared Storm Water Pollution Prevention Plan (SWPPP), Water Pollution Control Program (WPCP), and/or project permit requirements.

C. See **BR-4** for Temporary High Visibility Fencing (THVF) information.

Cultural Resources

CR-1: If cultural materials are discovered during construction, work activity within a 60-foot radius of the discovery would be stopped and the area secured until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

CR-2: If human remains and related items are discovered on private or State land, they would be treated in accordance with State Health and Safety Code § 7050.5. Further disturbances and activities would cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to California Public Resources Code (PRC) § 5097.98, if the remains are thought to be Native American, the coroner would notify the Native American Heritage Commission (NAHC) who would then notify the Most Likely Descendent (MLD).

Human remains and related items discovered on federally-owned lands would be treated in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (23 USC 3001). The procedures for dealing with the discovery of human remains, funerary objects, or sacred objects on federal land are described in the regulations that implement NAGPRA 43 Code of Federal Regulations (CFR) Part 10. All work in the vicinity of the discovery shall be halted and the administering agency's archaeologist would be notified immediately. Project activities in the vicinity of the discovery would not resume until the federal agency complies with the 43 CFR Part 10 regulations and provides notification to proceed.

Geology, Seismic/Topography, and Paleontology

GS-1: The project would be designed to minimize slope failure, settlement, and erosion using recommended construction techniques and Best Management Practices (BMPs). New earthen slopes would be vegetated to reduce erosion potential.

GS-2: In the unlikely event that paleontological resources (fossils) are encountered, all work within a 60-foot radius of the discovery would stop, the area would be secured, and the work would not resume until appropriate measures are taken.

Greenhouse Gas Emissions

GHG-1: Caltrans Standard Specification "Air Quality" requires compliance by the contractor with all applicable laws and regulations related to air quality.

GHG-2: Compliance with Title 13 of the California Code of Regulations, which includes restricting idling of diesel-fueled commercial motor vehicles and equipment with gross weight ratings of greater than 10,000 pounds to no more than 5 minutes.

GHG-3: Caltrans Standard Specification "Emissions Reduction" ensures that construction activities adhere to the most recent emissions reduction regulations mandated by the California Air Resource Board (CARB).

GHG-4: Use of a Transportation Management Plan (TMP) to minimize vehicle delays and idling emissions. As part of this, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along the highway during peak travel times.

GHG-5: All areas temporarily disturbed during construction would be revegetated with appropriate native species. Landscaping reduces surface warming and, through photosynthesis, decreases CO_2. This replanting would help offset any potential CO_2 emissions increase.

GHG-6: Pedestrian and bicycle access would be maintained on State Route 36 during project activities.

Hazardous Waste and Material

HW-1: Per Caltrans requirements, the contractor(s) would prepare a project-specific Lead Compliance Plan (California Code of Regulations (CCR) Title 8, § 1532.1, the "Lead in Construction" standard) to reduce worker exposure to lead-impacted soil. The plan would include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted soil.

HW-2: When identified as containing hazardous levels of lead, traffic stripes would be removed and disposed of in accordance with Caltrans Standard Special Provision "Remove Yellow Traffic Stripes and Pavement Markings with Hazardous Waste Residue" (SSP 14-11.12).

HW-3: If treated wood waste (such as removal of sign posts or guardrail) is generated during this project, it would be disposed of in accordance with Standard Specification "Treated Wood Waste."

HW-4: If asbestos containing material is removed during this project, it would be removed and disposed of in accordance with Standard Special Provision "Asbestos Compliance Plan".

Hydrology and Floodplain

HF-1: Existing bridge pilings would be removed to 3 feet below bed of channel, which would reduce resistance and blockage of water moving downstream in a flood event.

Traffic and Transportation

TT-1: Pedestrian and bicycle access would be maintained during construction.

TT-2: The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones.

TT-3: A Transportation Management Plan (TMP) would be applied to the project.

Utilities and Emergency Services

UE-1: All emergency response agencies in the project area would be notified of the project construction schedule and would have access to State Route 36 throughout the construction period.

UE-2: Caltrans would coordinate with utility providers to plan for relocation of any utilities to ensure utility customers would be notified of potential service disruptions before relocation.

UE-3: The project is located within the *Moderate* to *High* CAL FIRE Threat Zone. The contractor would be required to submit a jobsite Fire Prevention Plan as required by Cal/OSHA before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities.

Water Quality and Stormwater Runoff

WQ-1: The project would comply with the Provisions of the Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Order 2012-0011-DWQ) as amended by subsequent orders, which became effective July 1, 2013. If the project results in a land disturbance of one acre or more, coverage under the Construction General Permit (Order 21009-0009-DWQ) is also required.

Before any ground-disturbing activities, the contractor would prepare a Stormwater Pollution Prevention Plan (SWPPP) (per the Construction General Permit Order 2009-0009-DWQ) or Water Pollution Control Program (WPCP) (projects that result in a land disturbance of less than one acre) that includes erosion control measures and construction waste containment measures to protect Waters of the State during project construction.

The SWPPP or WPCP would identify the sources of pollutants that may affect the quality of stormwater; include construction site Best Management Practices (BMPs) to control sedimentation, erosion, and potential chemical pollutants; provide for construction materials management; include non-stormwater BMPs; and include routine inspections and a monitoring and reporting plan. All construction site BMPs would follow the latest edition of the *Caltrans Storm Water Quality Handbooks: Construction Site BMPs Manual* to control and reduce the impacts of construction-related activities, materials, and pollutants on the watershed.

The project SWPPP or WPCP would be continuously updated to adapt to changing site conditions during the construction phase.

Construction may require one or more of the following temporary construction site BMPs:

- Any spills or leaks from construction equipment (e.g., fuel, oil, hydraulic fluid, and grease) would be cleaned up in accordance with applicable local, state, and/or federal regulations.
- Accumulated stormwater, groundwater, or surface water from excavations or temporary containment facilities would be removed by dewatering.
- Water generated from the dewatering operations would be discharged on-site for dust control and/or to an infiltration basin, or disposed of off-site.

- Temporary sediment control and soil stabilization devices would be installed.
- Existing vegetated areas would be maintained to the maximum extent practicable.
- Clearing, grubbing, and excavation would be limited to specific locations, as delineated on the plans, to maximize the preservation of existing vegetation.
- Vegetation reestablishment or other stabilization measures would be implemented on disturbed soil areas, per the Erosion Control Plan.
- For SWPPP projects (which are governed according to both the Caltrans NPDES permit and the Construction General Permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES and CGP and the corresponding requirements of these permits are adhered to. For WPCP projects (which are governed according to the Caltrans NPDES permit), soil disturbance is permitted to occur year-round as long as the Caltrans NPDES permit is adhered to.

WQ-2: The project would incorporate pollution prevention and design measures consistent with the *2016 Caltrans Storm Water Management Plan*. This plan complies with the requirements of the Caltrans Statewide NPDES Permit (Order 2012-0011-DWQ) as amended by subsequent orders.

The project design may include one or more of the following:

- Vegetated surfaces would feature native plants, and revegetation would use the seed mixture, mulch, tackifier, and fertilizer recommended in the Erosion Control Plan prepared for the project.
- Where possible, stormwater would be directed in such a way as to sheet flow across vegetated slopes, thus providing filtration of any potential pollutants.

1.5 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation supporting a Categorical Exclusion determination will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special status species by the National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (USFWS)—in other words, species protected by the Federal Endangered Species Act [FESA]).

Chapter 2. CEQA Environmental Checklist

Environmental Factors Potentially Affected

The environmental factors noted below would be potentially affected by this project. Please see the CEQA Environmental Checklist on the following pages for additional information.

Potential Impact Area	**Impacted: Yes / No**
Aesthetics	**Yes**
Agriculture and Forest Resources	**Yes**
Air Quality	No
Biological Resources	**Yes**
Cultural Resources	No
Energy	No
Geology and Soils	No
Greenhouse Gas Emissions	**Yes**
Hazards and Hazardous Materials	No
Hydrology and Water Quality	**Yes**
Land Use and Planning	No
Mineral Resources	No
Noise	No
Population and Housing	No
Public Services	No
Recreation	No
Transportation	No
Tribal Cultural Resources	No
Utilities and Service Systems	No
Wildfire	No
Mandatory Findings of Significance	No

The CEQA Environmental Checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project will indicate there are no impacts to a particular resource. A "NO IMPACT" answer in the last column of the checklist reflects this determination.

The words "significant" and "significance" used throughout the CEQA Environmental Checklist are only related to potential impacts pursuant to CEQA. The questions in the CEQA Environmental Checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, as well as standardized measures applied to all or most Caltrans projects (such as Best Management Practices [BMPs] and measures included in the Standard Plans and Specifications or as Standard Special Provisions (SSPs) [Section 1.4]), are considered to be an integral part of the project and have been considered prior to any significance determinations documented in the checklist or document.

Project Impact Analysis Under CEQA

CEQA broadly defines "project" to include "*the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment*" (14 CCR § 15378). Under CEQA, normally the baseline for environmental impact analysis consists of the existing conditions at the time the environmental studies began. However, it is important to choose the baseline that most meaningfully informs decision-makers and the public of the project's possible impacts. Where existing conditions change or fluctuate over time, and where necessary to provide the most accurate picture practically possible of the project's impacts, a lead agency may define existing conditions by referencing historic conditions, or conditions expected when the project becomes operational, or both, that are supported with substantial evidence. In addition, a lead agency may also use baselines consisting of both existing conditions and projected future conditions that are supported by reliable projections based on substantial evidence in the record. The CEQA Guidelines require a "statement of the objectives sought by the proposed project" (14 CCR § 15124(b)).

CEQA requires the identification of each potentially "significant effect on the environment" resulting from the project, and ways to mitigate each significant effect. Significance is defined as *"Substantial or potentially substantial adverse change to any of the physical conditions within the area affected by the project"* (14 CCR § 15382). CEQA determinations are made prior to and separate from the development of mitigation measures for the project.

The legal standard for determining the significance of impacts is whether a "fair argument" can be made that a "substantial adverse change in physical conditions" would occur. The fair argument must be backed by substantial evidence including facts, reasonable assumption predicated upon fact, or expert opinion supported by facts. Generally, an environmental professional with specific training in an area of environmental review can make this determination.

Though not required, CEQA suggests Lead Agencies adopt thresholds of significance, which define the level of effect above which the Lead Agency will consider impacts to be significant, and below which it will consider impacts to be less than significant. Given the size of California and it's varied, diverse, and complex ecosystems, as a Lead Agency that encompasses the entire State, developing thresholds of significance on a state-wide basis has not been pursued by Caltrans. Rather, to ensure each resource is evaluated objectively, Caltrans analyzes potential resource impacts in the project area based on their location and the effect of the potential impact on the resource as a whole. For example, if a project has the potential to impact 0.10 acre of wetland in a watershed that has minimal development and contains thousands of acres of wetland, then a "less than significant" determination would be considered appropriate. In comparison, if 0.10 acre of wetland would be impacted that is located within a park in a city that only has 1.00 acre of total wetland, then the 0.10 acre of wetland impact could be considered "significant."

If the action may have a potentially significant effect on any environmental resource (even with mitigation measures implemented), then an Environmental Impact Report (EIR) must be prepared. Under CEQA, the lead agency may adopt a negative declaration (ND) if there is no substantial evidence that the project may have a potentially significant effect on the environment (14 CCR § 15070(a)). A proposed negative declaration must be circulated for public review, along with a document known as an Initial Study. CEQA allows for a "Mitigated Negative Declaration" in which mitigation measures are proposed to reduce potentially significant effects to less than significant (14 CCR § 15369.5).

Although the formulation of mitigation measures shall not be deferred until some future time, the specific details of a mitigation measure may be developed after project approval when it is impractical or infeasible to include those details during the project's environmental review. The lead agency must (1) commit itself to the mitigation, (2) adopt specific performance standards the mitigation will achieve, and (3) identify the type(s) of potential action(s) that can feasibly achieve that performance standard and that will be considered, analyzed, and potentially incorporated in the mitigation measure.

Compliance with a regulatory permit or other similar processes may be identified as mitigation if compliance would result in implementation of measures that would be reasonably expected, based on substantial evidence in the record, to reduce the significant impact to the specified performance standards (§ 15126.4(a)(1)(B)).

Per CEQA, measures may also be adopted, but are not required, for environmental impacts that are not found to be significant (14 CCR § 15126.4(a)(3)). Under CEQA, mitigation is defined as avoiding, minimizing, rectifying, reducing, and compensating for any potential impacts (CEQA 15370). Regulatory agencies may require additional measures beyond those required for compliance with CEQA. Though not considered "mitigation" under CEQA, these measures are often referred to in an Initial Study as "mitigation", Good Stewardship or Best Management Practices. These measures can also be identified after the Initial Study/Negative Declaration is approved.

CEQA documents must consider direct and indirect impacts of a project (California Public Resources Code § 21065.3). They are to focus on significant impacts (14 CCR § 15126.2(a)). Impacts that are less than significant need only be briefly described (14 CCR § 15128). All potentially significant effects must be addressed.

No-Build Alternative

For each of the following CEQA Environmental Checklist questions, the "No-Build" Alternative has been determined to have "No Impact". Under the "No-Build" Alternative, no alterations to the existing conditions would occur and no proposed improvements would be implemented. The "No-Build" Alternative will not be discussed further in this document.

Definitions of Project Parameters

When determining the parameters of a project for potential impacts, the following definitions are provided:

Project Area: This is the general area where the project is located. This term is mainly used in the Environmental Setting section (e.g., watershed, climate type, etc.).

Project Limits: This is the beginning and ending post miles for a project. This is different than the ESL in that it sets the beginning and ending limits of a project along the highway. It is the limits programmed for a project, and every report, memo, etc. associated with a project should use the same post mile limits. In some cases, there may be areas associated with a project that are outside of the project limits, such as staging and disposal locations.

Project Footprint: The area within the Environmental Study Limits (ESL) the project is anticipated to impact, both temporarily and permanently. This includes staging and disposal areas.

Environmental Study Limits (ESL): The project engineer provides the Environmental team the ESL as an anticipated boundary for potential impacts. The ESL is *not* the project footprint. Rather, it is the area encompassing the project footprint where there could *potentially* be direct and indirect disturbance by construction activity. The ESL is larger than the project footprint in order to accommodate any future scope changes. The ESL is also used for identifying the various Biological Study Areas (BSAs) needed for different biological resources.

Biological Study Area (BSA): The BSA encompasses the ESL plus any areas outside of the ESL that could potentially affected by a project (e.g., noise, visual, Coastal Zone, etc.). Depending on resources in the area, a project could have multiple BSAs. Each BSA should be identified and defined.

2.1 Aesthetics

Except as provided in the Public Resources Code Section 21099:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Have a substantial adverse effect on a scenic vista?				✓
Would the project: b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
Would the project: 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 a 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?				✓
Would the project: d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓

Regulatory Setting

The California Environmental Quality Act (CEQA) establishes it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic*, natural, scenic and historic environmental qualities" (California Public Resources Code [PRC] Section 21001[b]).

Environmental Setting

The project is located on SR 36, which is a narrow two-lane road that curves along the Van Duzen River corridor. The route is eligible for California State Scenic Highway status (Caltrans 2022a). This segment of SR 36 is also a Blue Star Memorial Highway. The project area is characterized by dappled sunlight from tall trees near the roadway, rural communities, riverine landscape, agricultural views, and wildlife habitat. The project would cross over Yager Creek, which is a large tributary to the Van Duzen River. Viewer groups include neighbors, such as local residents and small businesses, as well as highway users including local commuters, recreationists, and commercial traffic between I-5 and U.S. 101.

Discussion of CEQA Environmental Checklist Question 2.1—Aesthetics

a) Would the project have a substantial adverse effect on a scenic vista?

There are no scenic vistas located within the project limits. Therefore, Caltrans has determined "***no impact***" would occur.

b) Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings, within a state scenic highway?

The project would remove trees in several locations.

- Approximately 52 small-diameter Coast redwoods (*Sequoia sempervirens*) would be removed from the eastbound roadside between Fisher Road and SR 36.
- Two medium-size redwood trees (greater than 3 feet dbh) would be removed to install the northwest abutment of the new bridge at Ward Creek (PM 4.39). An additional six redwood trees under 3 feet DBH, five big leaf maples (*Acer macrophyllum*), and three alders (*Alnus rubra*) would be removed south of SR 36 at Ward Creek to accommodate the old bridge removal.

- Additionally,Between PM 5.60 and PM 5.90 approximately 22 black cottonwood trees, 1 big leaf maple (*Acer macrophyllum*), 1 alder (*Alnus rubra*), and 1 willow tree (*Salix sp.*) would be removed to realign the roadway between PM 5.60 and PM 5.96.

Rock outcroppings were not identified in the project footprint. No damage to historic buildings would occur.

Overall, the project features would have low to low-moderate visual impacts to viewers. The Ward Creek Bridge would create a positive visual impact due to the proposed materials, colors, and design of the bridge. Through gaps in the proposed bridge railing, travelers would see a newly restored stream site and native vegetation. Replanted trees would be the same species as the removed trees and the temporary visual impacts from tree removal would become less apparent as the trees matured and as vegetation filled in. Visual impacts would eventually become minor and less noticeable. The Project Development Team would continue to look for ways to refine and reduce these estimates throughout the final Design phase of the project. Therefore, Caltrans has determined a "***less than significant impact***" would occur.

c) Would the project, 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 a publicly accessible vantage point.)

No, the existing visual character and quality would not be degraded. Trees would still dapple the light on the roadway and the right of way acquisitions would not visibly reduce the amount of agricultural views from the road. The new bridge would be designed with aesthetic treatments to coordinate with other local bridges. Therefore, Caltrans has determined "***no impact***" would occur.

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 new light sources would result from this project. A single radar feedback sign would be removed and replaced at a new location within the project limits (approximately PM 5.85). Therefore, Caltrans has determined "***no impact***" would occur.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this project.

2.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment (LESA) Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project; the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board (CARB).

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			✓	
Would the project: b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: c) Conflict with existing zoning for, or cause rezoning of forest land (as defined by 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))?				✓
Would the project: d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
Would the project: 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?				✓

Regulatory Setting

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

Environmental Setting

The project is located in a rural, mostly agricultural area along an existing state highway. Prime Farmland and Farmland of Statewide Importance were identified within the Environmental Study Limits (ESL). Williamson Act contract farmland exists near the project, but outside the ESL. Managed forestland and timberlands are located to the north, outside the project footprint.

Discussion of CEQA Environmental Checklist Question 2.2—Agriculture and Forest Resources

a) Would the project 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?

Most of the designated farmland that would be converted has not been recently farmed (Appendix E). During consultation with the United States Department of Agriculture and the County of Humboldt, Caltrans estimated the project may convert up to 2.00 acres of Prime Farmland and Farmland of Statewide Importance to non-agricultural uses (Caltrans 2022b). Since then, the estimate has been refined and Caltrans anticipates converting approximately 1.94 acres of Prime Farmland and Farmland of Statewide Importance to non-agricultural use. Table 4 lists the key factors that were used to determine the conversion would have a "***less than significant impact***" on Agriculture and Forest Resources.

Table 4. Farmland Conversion

Land Converted (acres)	Prime and Unique Farmland (acres)	Percent of Farmland in County	Percent Farmland with Same or Higher Relative Value	Farmland Conversion Impact Rating
1.94	0.10	0.00	4.00%	73

Source: Form NRCS-CPA-106 (Farmland Conversion Impact Rating for Corridor-Type Projects)

b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

No, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, Caltrans has determined "***no impact***" would occur.

c) Would the project conflict with existing zoning or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No, the project would not conflict with existing zoning or cause rezoning of forest land, timberland, or Timberland Production areas. Therefore, Caltrans has determined "***no impact***" would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No, the project would not result in the loss of forest land or convert forest land to non-forest use. Therefore, Caltrans has determined "***no impact***"would occur.

e) Would the project 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?

There are no other changes proposed to the existing environment that could result in the conversion of farmland from this project. The rural highway environment would persist, and the changes made during this project would be adjacent to the existing highway corridor. Therefore, Caltrans has determined "***no impact***" would occur.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this project.

2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Conflict with or obstruct implementation of the applicable air quality plan?				✓
Would the project: 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?				✓
Would the project: c) Expose sensitive receptors to substantial pollutant concentrations?				✓
Would the project: d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Traffic, Noise, Air Quality, Energy, and Greenhouse Gas Memo* dated May 11, 2021 (Caltrans 2021a), and the *Energy and Greenhouse Gas Update Memo* dated July 29, 2022 (Caltrans 2022c). Potential impacts to Air Quality are not anticipated because the project location in Humboldt County is categorized as an attainment/unclassified area for all current National Ambient Air Quality Standards (NAAQS). Therefore, transportation conformity requirements do not apply. Additionally, as

the project would not result in changes to the traffic volume, capacity, vehicle miles traveled (VMT), fleet mix, location of an existing facility, or any other factor that would increase long-term operational emissions relative to the No-Build Alternative, Caltrans has determined "***no impact***" would occur.

2.4 Biological Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric administration (NOAA) Fisheries?			✓	
Would the project: 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?		✓	✓	
Would the project: 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?		✓		

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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?			✓	
Would the project: e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓
Would the project: f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Regulatory Setting

Within this section of the document (2.4. Biological Resources), the topics are separated into Sensitive Natural Communities, Wetlands and Other Waters, Plant Species, Animal Species, Threatened and Endangered Species, and Invasive Species. Plant and animal species listed as "threatened" or "endangered" are covered within the Threatened and Endangered sections. Other special status plant and animal species, including California Department of Fish and Wildlife (CDFW) fully protected species and species of special concern, U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) candidate species, and California Native Plant Society (CNPS) rare and endangered plants are covered in the respective Plant and Animal sections.

Sensitive Natural Communities

CDFW maintains a list of sensitive natural communities (SNCs). SNCs are those natural communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat.

Wetlands and Other Waters

"Waters" of the United States (including wetlands) and State are protected under several laws and regulations. The primary laws and regulations governing wetlands and other waters include:

- Federal: Clean Water Act (CWA)–33 United States Code (USC) Section 1344
- Federal: Executive Order for the Protection of Wetlands (EO 11990)
- State: California Fish and Game Code (CFGC)–Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act–Sections 3000 et seq.

Plant Species

The USFWS and CDFW have regulatory responsibility for the protection of special status plant species. The primary laws governing plant species include:

- Federal Endangered Species Act (FESA)–16 USC Sections 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402
- California Endangered Species Act (CESA)–California Fish and Game Code Sections 2050, et seq.
- Native Plant Protection Act–California Fish and Game Code Sections 1900–1913
- National Environmental Policy Act (NEPA)–40 CFR Section 1500 through Section 1508
- California Environmental Quality Act (CEQA)–California Public Resources Code Sections 21000–21177

Animal Species

The USFWS, NMFS, and CDFW have regulatory responsibility for the protection of special status animal species. The primary laws governing animal species include:

- NEPA–40 CFR Section 1500 through Section 1508
- CEQA–California Public Resources Code Sections 21000–21177
- Migratory Bird Treaty Act–16 USC Sections 703–712
- Fish and Wildlife Coordination Act–16 USC Section 661
- California Fish and Game Code–Sections 1600–1603
- California Fish and Game Code–Sections 4150 and 4152

Threatened and Endangered Species

The primary laws governing threatened and endangered species include:

- FESA–USC 16 Sections 1531, et seq. See also 50 CFR Part 402
- CESA–California Fish and Game Code Sections 2050, et seq.
- CESA–California Fish and Game Code Section 2080
- CEQA–California Public Resources Code Sections 21000–21177
- Magnuson-Stevens Fishery Conservation and Management Act–16 USC Section 1801, as amended

Invasive Species

The primary laws governing invasive species are Executive Order (EO) 13112 and National Environmental Policy Act (NEPA).

Environmental Setting

A Natural Environment Study (NES) was prepared for the project (Caltrans 2022d). Caltrans coordinated with fisheries biologists and water quality specialists, as well as agency personnel from USFWS, NMFS, CDFW, NCRWQCB, and USACE. See Chapter 3 for a summary of coordination efforts and professional contacts.

The study area consists of the project footprint, Environmental Study Limits (ESL), and the Biological Study Area (BSA). The ESL and BSA were established to evaluate the potential presence of Natural Communities of Special Concern (NCSC) and special status plants and animals (Figure 3).

- The "project footprint" referenced in this document describes the area within the Environmental Study Limits (ESL) the project is anticipated to impact, both temporarily and permanently (Figure 3). This includes construction activities, staging and disposal areas.

- The ESL is the area encompassing the project footprint where there could *potentially* be direct and indirect disturbance by construction activities, equipment staging, and access routes (Figure 3). The ESL is larger than the project footprint to accommodate potential future scope changes. Field reviews were conducted within the ESL to identify existing habitat types and natural communities, potential jurisdictional waters and wetlands, rare species and/or factors indicating the potential for rare species (i.e., presence of suitable habitat), sensitive water quality receptors (e.g., amphibians/fish), and existing ambient noise levels.

- The BSA includes a 0.25-mile buffer outside the ESL and any additional areas that could be affected by the noise of construction or instream work near fish-bearing waters that could potentially affect species.

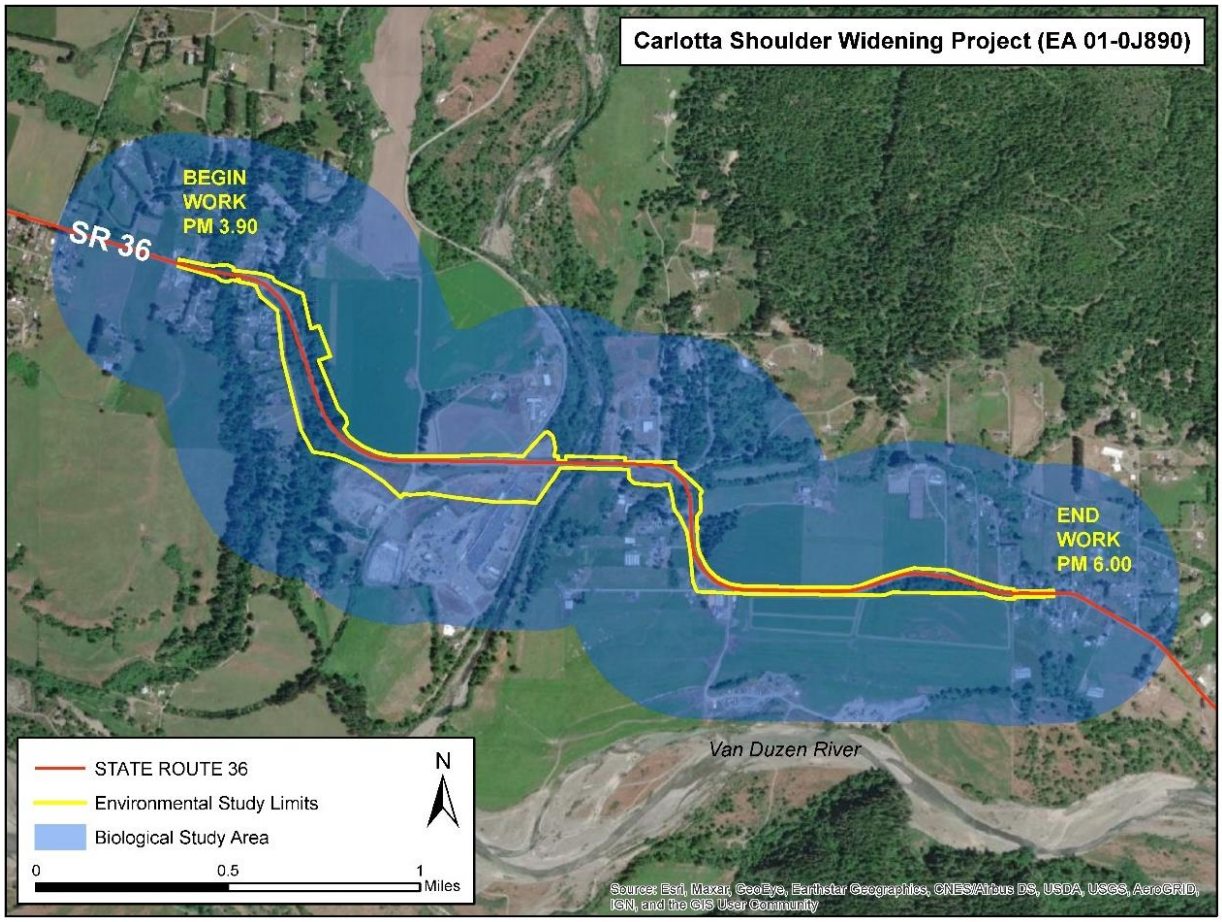

Figure 3. Project ESL and BSA Map

The project is within the Hydesville United States Geological Survey (USGS) quadrangle. It is also within the Northwestern Region of the California Floristic Province, in the Outer North Coast Ranges sub-region. The area is influenced by the coastal marine climate, resulting in mild, foggy summers and wet winters. Weather data from the Scotia, California (048045) monitoring station shows that the project location has a Mean Annual Precipitation of 47.98 inches with an Average Monthly Minimum January temperature of 40.3 degrees Fahrenheit (ºF) and an average maximum July temperature of 69.1ºF. Rainfall occurs mainly in the winter months and the average total snowfall is 0.3 inch annually.

Elevations throughout the project ESL range from approximately 115 to 280 feet above sea level. The west end of the ESL is located on a fluvial terrace and is higher in elevation than the rest of the project corridor. The area contains an uplifted alluvial terrace to the west of the Yager Creek floodplain of the Van Duzen River valley.

The two primary soil types within the ESL are the Weott and Ferndale series. The Weott series consists of very deep, very poorly drained soils on depressions and low floodplain steps on alluvial plains. The Ferndale series consists of very deep, well drained soils on high floodplain steps on alluvial plains. These soils formed in alluvium and are considered hydric.

Ambient noise levels within the project site are typically between 81-90 decibels (dB) and are generally due to the presence of highway traffic including recreational vehicles, large trucks, buses, and loud motorcycles. These existing noise levels fall within the "high" range of the USFWS guidelines (USFWS 2006).

Sensitive Natural Communities

Sensitive Natural Communities (SNCs) are natural communities that have limited distribution statewide, or within a county or region, and are often vulnerable to environmental effects of projects. These communities may or may not contain special status taxa or their habitat. High priority SNCs are globally (G) and state (S) ranked 1 to 3, where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. Global and state ranks of 4 and 5 are considered apparently secure and demonstrably secure, respectively.

Within the 60-acre ESL, approximately 9.3 acres of the Coast Redwood (*Sequoia sempervirens*) Forest and Woodland Alliance (G3S3) is present adjacent to Ward Creek and along SR 36, parallel to Fisher Road. Ruderal vegetation is also present along the roadway and more heavily traveled footpaths within the project area.

A narrow stand of black cottonwood (*Populus trichocarpa*) trees is present at the eastern end of the project limits between PM 5.60 and PM 5.96. This isolated riparian forest represents approximately 2.75 acres of the 60-acre ESL and is surrounded by rural farmland. This area qualifies as a Black Cottonwood (*Populus trichocarpa*) Forest and Woodland Alliance (G5S3) because more than 30% of the relative cover in the tree canopy is from black cottonwood. However, this area is heavily influenced by edge effects and habitat fragmentation due to the proximity of the road corridor and adjacent agricultural and residential uses, and therefore is not considered high-quality.

Wetlands and Other Waters

There are four riverine systems within the project ESL: Barber Creek, Ward Creek, Yager Creek, and Wilson Creek which are federally and state-recognized jurisdictional waters. Ward Creek is a low gradient, seasonal tributary to Yager Creek and is the only fish-bearing location addressed by the proposed project.

Several wetland features are shown within the ESL on the National Wetlands Inventory (NWI) map (Caltrans 2022d). Ward Creek runs from north to south along the western edge of the Yager Creek floodplain, at the base of the uplifted terrace surface to the west. In the vicinity of the highway, the Ward Creek channel is approximately 8 feet below the adjacent flood plain, with gently sloping sides descending to approximately 2-foot-high channel banks. The channel banks are cut into silty soils and the channel base is armored with gravelly alluvium. During a site visit on January 31, 2020, the active channel was approximately 5.5 feet wide within the project footprint. Upstream of the SR 36 crossing, the channel migration zone[2] is approximately 31 feet. The existing culvert appears to be perched, which created a pool at the inlet.

Riparian vegetation present on the banks of Ward Creek within the ESL includes arroyo willow (*Salix lasiolepis*), red alder (*Alnus rubra*), big leaf maple (*Acer macrophyllum*), twinberry (*Lonicera involucrata*), common horsetail (*Equisetum arvense*), several redwoods (*Sequoia sempervirens*), and several fern species.

PLANT SPECIES

The California Native Plant Society (CNPS) inventory, California Natural Diversity Database (CNDDB) and USFWS Information for Planning and Conservation (IPaC) species lists indicate several rare plants that could potentially occur within the project region (Appendix C). However, none of the plants in these records were detected within the BSA ESL during floristic surveys in 2020 and 2021 (Table 5).

Between the release of the Draft Environmental Document and this Final Environmental Document, two plant species were added to the CNPS rare plant list. They have been added to Table 5.

[2] The channel migration zone is an area where a stream or river channel can be reasonably predicted to move naturally over time in response to gravity and topography.

Table 5. Special Status Plant Species and Critical Habitat Potentially Occurring within the Project Area

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Abronia umbellata var. *breviflora*	pink sand-verbena	--/--/1B.1	Coastal dunes, foredunes and interdunes with sparse cover. This is usually the plant closest to the ocean. 0-30 feet (0-10 meters); June-Oct	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Angelica lucida	sea-watch	--/--/4.2	Coastal bluff scrub, coastal dunes, coastal scrub, marshes and swamps. 0-490 feet (0-150 meters); Apr-Sep	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Astragalus rattanii var. *rattanii*	Rattan's milk-vetch	--/--/4.3	Chaparral, cismontane woodland, lower montane coniferous forest. 100-2,705 feet (30-825 meters); Apr-Jul	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Cardamine angulata	seaside bittercress	--/--/2B.2	Lower montane coniferous forest, North Coast coniferous forest, streambanks. 50-3,000 feet (15-915 meters); (Jan) Mar-July	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Carex arcta	northern clustered sedge	--/--/2B.2	Bogs and fens, North Coast coniferous forest. 195-4,595 feet (60-1,400 meters); June-Sep	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Carex leptalea	bristle-stalked sedge	--/--/2B.2	Bogs and fens, marshes and swamps, meadows and seeps. 0-2,295 feet (0-700 meters); Mar-July	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Carex lyngbyei	Lyngbye's sedge	--/--/2B.2	Marshes and swamps, 0-35 feet	Absent	The ESL does not contain suitable habitat and is outside known elevation range.
Castilleja ambigua var. *ambigua*	johnny-nip	--/--/4.2	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pools. 0-1,425 feet (0-435 meters); Mar-Aug	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Castilleja ambigua var. *humboldtiensis*	Humboldt Bay owl's-clover	--/--/1B.2	Marshes and swamps. In coastal saltmarsh with *Spartina*, *Distichlis*, *Salicornia*, *Jaumea*. 0-10 feet (0-3 meters); Apr-Aug	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Castilleja litoralis	Oregon coast paintbrush	--/--/2B.2	Coastal bluff scrub, coastal dunes, coastal scrub, sandy sites. 50-330 feet (15-100 meters); June	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Chloropyron maritimum ssp. *palustre*	Point Reyes salty bird's-beak	--/--/1B.2	Marshes and swamps. Usually in coastal salt marsh with *Spartina*, *Distichlis*, *Salicornia*, *Jaumea*, etc. 0-35 feet (0-10 meters); June-Oct	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Chrysosplenium glechomifolium	Pacific golden saxifrage	--/--/4.3	North Coast coniferous forest, riparian forest, roadsides (sometimes), seeps (sometimes), streambanks. 35-720 feet (10-220 meters); Feb-June	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	--/--/1B.1	Coastal bluff scrub, coastal scrub. 35-330 feet (10-100 meters); June-Aug	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Collomia tracyi	Tracy's collomia	--/--/4.3	Broadleafed upland forest, lower montane coniferous forest, rocky, serpentinite (sometimes). 985-6,890 feet (300-2,100 meters); June-July	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Coptis laciniata	Oregon goldthread	--/--/4.2	Meadows and seeps, North Coast coniferous forest, mesic sites such as moist streambanks. 0-3,280 feet (0-1,000 meters); (Feb) Mar-May (Sep-Nov)	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Downingia willamettensis	Cascade downingia	--/--/2B.2	Cismontane woodland, valley and foothill grassland, vernal pools. Lake margins. 50-3,640 feet (15-1,110 meters); June-July (Sep)	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Epilobium septentrionale	Humboldt County fuchsia	--/--/4.3	Broadleafed upland forest, North Coast coniferous forest. 150-5,905 feet (45-1,800 meters); July-Sep	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Erythronium oregonum	giant fawn lily	--/--/2B.2	Cismontane woodland, meadows and seeps. 330-3,775 feet (100-1,150 meters); Mar-June (July)	Absent	The ESL is outside known elevation range and species was not observed during protocol-level botanical surveys.
Erythronium revolutum	coast fawn lily	--/--/2B.2	Bogs and fens, broadleafed upland forest, North Coast coniferous forest. 0-5,250 feet (0-1,600 meters); Mar-July(Aug)	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Fissidens pauperculus	minute pocket moss	--/--/1B.2	North Coast coniferous forest. 35-3,360 feet (10-1,024 meters)	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Fritillaria purdyi	Purdy's fritillary	--/--/4.3	Chaparral, cismontane woodland, lower montane coniferous forest. 575-7,400 feet (175-2,255 meters); Mar-June	Absent	The ESL is outside known elevation range and species was not observed during protocol-level botanical surveys.
Gilia capitata ssp. *pacifica*	Pacific gilia	--/--/1B.2	Chaparral, coastal bluff scrub, coastal prairie, valley and foothill grassland. 15-5,465 feet (5-1,665 meters); Apr-Aug	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Gilia millefoliata	dark-eyed gilia	--/--/1B.2	Coastal dunes. 5-100 feet (2-30 meters); Apr-July	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Glehnia littoralis ssp. *leiocarpa*	American glehnia	--/--/4.2	Coastal dunes. 0-65 feet (0-20 meters); May-Aug	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Hemizonia congesta ssp. *tracyi*	Tracy's tarplant	--/--/4.3	Coastal prairie, lower montane coniferous forest, North Coast coniferous forest. 395-3,935 feet (120-1,200 meters); (Mar) May-Oct	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	--/--/1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0-705 feet (0-215 meters); Mar-June	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Hosackia gracilis	harlequin lotus	--/--/4.2	Broadleafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, North Coast coniferous forest, valley and foothill grassland. 0-2,295 feet (0-700 meters); Mar-July	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Lathyrus glandulosus	sticky pea	--/--/4.3	Cismontane woodland. 985-2,625 feet (300-800 meters); Apr-June	Absent	The ESL is outside known elevation range and species was not observed during protocol-level botanical surveys.
Layia carnosa	beach layia	FT/SE/1B.1	Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-195 feet (0-60 meters); Mar-July	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Lilium kelloggii	Kellogg's lily	--/--/4.3	Lower montane coniferous forest, North Coast coniferous forest. 10-4,265 feet (3-1,300 meters); May-Aug	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Lilium occidentale	western lily	FE/SE/1B.1	Bogs and fens, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, North Coast coniferous forest. 5-605 feet (2-185 meters); June-July	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Lilium rubescens	redwood lily	--/--/4.2	Broadleafed upland forest, chaparral, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest. 100-6,265 feet (30-1,910 meters); Apr-Aug (Sep)	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Listera cordata	heart-leaved twayblade	--/--/4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest. 15-4,495 feet (5-1,370 meters); Feb-July	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Lycopodium clavatum	running-pine	--/--/4.1	Lower montane coniferous forest, marshes and swamps, North Coast coniferous forest. Forest understory, edges, openings, roadsides; mesic sites with partial shade and light. 150-4,020 feet (45-1,225 meters); June-Aug (Sep)	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Lycopus uniflorus	northern bugleweed	--/--/4.3	Bogs and fens, marshes and swamps. 15-6,560 feet (5-2,000 meters); July-Sep	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Mitellastra caulescens	leafy-stemmed mitrewort	--/--/4.2	Broadleafed upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest; mesic sites. 15-5,580 feet (5-1,700 meters); (Mar) Apr-Oct	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Montia howellii	Howell's montia	--/--/2B.2	Meadows and seeps, North Coast coniferous forest, vernal pools. Vernally wet sites; often on compacted soil. 0-2,740 feet (0-835 meters); (Feb) Mar-May	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	--/--/1B.1	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools and swales; adobe or alkaline soils. 15-5,710 feet (5-1,740 meters); Apr-Jul	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Noccaea fendleri ssp. *californica*	Kneeland Prairie pennycress	FE/--/1B.1	Coastal prairie. Serpentine rock outcrops. 2,495-2,675 feet (760-815 meters); May-June	Absent	The ESL does not contain suitable habitat and is outside known elevation range. Species was not observed during protocol-level botanical surveys.
Packera bolanderi var. *bolanderi*	seacoast ragwort	--/--/2B.2	Coastal scrub, North Coast coniferous forest. Sometimes along roadsides. 10-2,135 feet (30-650 meters); (Jan-Apr) May-Aug	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Piperia candida	white-flowered rein orchid	--/--/1B.2	Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest. 100-4,300 feet (30-1,310 meters); (Mar) May-Sep	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Pityopus californicus	California pinefoot	--/--/4.2	Broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest, upper montane coniferous forest. 50-7,300 feet (15-2,225 meters); (Mar-Apr) May-Aug	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Platismatia lacunosa	Crinkled rag lichen	--/--/2B.3	Moist riparian forest between 0-3500 feet, often on upper branches of red alders, western hemlock, Sitka spruce, big leaf maple, and vine maple. Most common in mature to old-growth forest.	Present	The ESL does contain suitable habitat. Presence assumed until surveys are completed. One occurrence from 1930 along Lawrence Creek, approximately 4.3 miles north of the ESL.
Pleuropogon refractus	nodding semaphore grass	--/--/4.2	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest. 0-5,250 feet (0-1,600 meters); (Mar) Apr-Aug	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Polemonium carneum	Oregon polemonium	--/--/2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest. 0-6,005 feet (0-1,830 meters); Apr-Sep	Absent	The ESL does not contain suitable habitat and species was not observed during protocol-level botanical surveys.
Ribes laxiflorum	trailing black currant	--/--/4.3	North Coast coniferous forest. 15-4,575 feet (5-1,395 meters); Mar-July (Aug)	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Ribes roezlii var. *amictum*	hoary gooseberry	--/--/4.3	Broadleafed upland forest, cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. 395-7,545 feet (120-2,300 meters); Mar-Apr	Absent	The ESL is outside suitable elevation range and species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Sidalcea malachroides	maple-leaved checkerbloom	--/--/4.2	Broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland. Woodlands and clearings near coast; often in disturbed areas. 0-2,395 feet (0-730 meters); (Mar) Apr-Aug	Present	The ESL does contain suitable habitat and CNDDB lists an historic occurrence for this species within the ESL with a 1-mile accuracy. However, species was not observed during protocol-level botanical surveys.
Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	--/--/1B.2	Coastal bluff scrub, coastal prairie, North Coast coniferous forest. Open coastal forest; roadcuts. 50-4,035 feet (15-1,230 meters); (Mar) May-Aug	Absent	No suitable habitat within project limits and species was not observed during protocol-level botanical surveys.
Sidalcea oregana ssp. *eximia*	coast checkerbloom	--/--/1B.2	Lower montane coniferous forest, meadows and seeps, North Coast coniferous forest. Near meadows, in gravelly soil. 15-4,395 feet (5-1,340 meters); June-Aug	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.
Spergularia canadensis var. *occidentalis*	western sand-spurrey	--/--/2B.1	Marshes and swamps. 0-10 feet (0-3 meters); June-Aug	Absent	The ESL does not contain suitable habitat and is outside suitable elevation range. Species was not observed during protocol-level botanical surveys.
Tiarella trifoliata var. *trifoliata*	trifoliate laceflower	--/--/3.2	Lower montane coniferous forest, North Coast coniferous forest. 560-4,920 feet (170-1,500 meters); (May) June-Aug	Absent	The ESL is outside suitable elevation range and species was not observed during protocol-level botanical surveys.

Scientific Name	Common Name	Status** USFWS/ CDFW/ CRPR	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Usnea longissima	Methuselah's beard lichen	--/--/4.2	Broadleafed upland forest, North Coast coniferous forest. 165-4,790 feet (50-1,460 meters).	Present	The ESL does contain suitable habitat; however, species was not observed during protocol-level botanical surveys.

Federal

-- = No status definition.
FE = Endangered.

State

-- = No status definition.
SE = Listed as endangered under the California Endangered Species Act.

California Rare Plant Rank (CRPR)

-- = No status definition.
Rank 1A = Plants presumed extinct in California.
Rank 1B = Plants are rare and endangered in California.
Rank 2 = Plants endangered in California, but more common elsewhere.
Rank 3 = Plants that need consideration per CEQA due to lack the necessary information to assign them to one of the other ranks or to reject them.
Rank 4 = Plants of limited distribution or infrequent throughout a broader area in California, so that their vulnerability or susceptibility to threat appears low at this time, from a statewide perspective. However, these taxa warrant regular monitoring for evidence of decline and subsequent transfer to a more sensitive rank.

Sources: CNPS 2022

Crinkled Rag Lichen

The crinkled rag lichen (*Platismatia lacunosa)* is an uncommon lichen, upgraded to a California Rare Plant Rank (CRPR) of 2B.3 in February 2023, and was added to the CNPS 9-quad search surrounding the Hydesville quadrangle (Caltrans 2023a). The lichen is found in moist riparian forests between 0-3500 feet in elevation where it often occurs on the upper branches of red alders (*Alnus rubra*). Other substrates include western hemlock (*Tsuga heterophylla*), Sitka spruce (*Picea sitchensis*), big leaf maple (*Acer macrophyllum*), and vine maple (*Acer circinatum*). It is more common in mature to old-growth forests, but it does occur in second-growth forests with old-growth remnants or mature red alders. The primary threat to this species is the removal of its substrate and it is considered sensitive to air pollution.

Presence of the crinkled rag lichen would be assumed until surveys are complete (Caltrans 2023a). Surveys for this species are expected to be completed in May 2023. The CNDDB lists one historic occurrence in 1930 along Lawrence Creek, a tributary of Yager Creek and approximately 4.3 miles north of the ESL.

ANIMAL SPECIES

Certain animals are considered to "species of special concern" (SSC) based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status animals occurring on-site. Species of special concern that may be present within the BSA are discussed below. SSC occurrences within the region are identified on the USFWS and NMFS species lists and CNDDB query (Appendix C).

Those special status and sensitive species which could potentially occur within the project study area are discussed further following Table 6.

Species listed or proposed for listing as federal/state threatened or federal/state endangered by regulatory agencies are discussed in the next section (Threatened and Endangered Species).

Special status species with no potential to occur in the project area are not discussed further in this document. Those species where the project either lacks suitable habitat or is outside the elevation and/or geographical range of the species will not be discussed further.

Table 6. Special Status Animal Species Potentially Occurring within the Project Area

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
AMPHIBIANS AND REPTILES					
Ascaphus truei	Pacific tailed frog	--/SSC	Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 59°F (15°C).	Absent	No suitable habitat exists within the ESL.
Emys marmorata	Western pond turtle	--/SSC	Ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Need basking sites and suitable upland habitat (sandy banks or grassy open fields) within 0.3 mile of water for egg laying.	Present	Suitable habitat is not present within the ESL; however, is present within the BSA.
Rana aurora	Northern red-legged frog	--/SSC	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover. Generally near permanent water, but can be found far from water in damp woods and meadows during non-breeding season.	Present	There is suitable habitat within the ESL. This species was observed at Ward Creek in summer 2021 and 2022.
Rana boylii	Foothill yellow-legged frog (Northwestern California clade)	--/SSC	Creeks or rivers in woodlands or forests with rock and gravel substrate and low overhanging vegetation along the edge. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Present	There is suitable habitat within the ESL and BSA. CNDDB lists an historic occurrence for this species within the ESL with a 0.4-mile accuracy

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Rhyacotriton variegatus	Southern torrent salamander	--/SSC	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old-growth forest. Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.	Absent	No suitable habitat exists within the ESL.
BIRDS					
Accipiter cooperii	Cooper's hawk	--/WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Present	Suitable foraging habitat is present within the BSA; however, species was not observed.
Accipiter striatus	sharp-shinned hawk	--/WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 feet of water.	Present	Suitable foraging habitat is present within the BSA; however, species was not observed.
Agelaius tricolor	tricolored blackbird	--/ST, SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few miles of the colony.	Absent	Suitable nesting habitat is not present within the BSA; species was not observed.
Ammodramus savannarum	grasshopper sparrow	--/SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Present	Suitable foraging habitat is present within the BSA; however, species was not observed.

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Aquila chrysaetos	golden eagle	--/FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Absent	Suitable nesting habitat does not exist within the ESL.
Brachyramphus marmoratus	marbled murrelet	FT/SE	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	Present CH Absent	Suitable habitat is not present within ESL; however, is present withinor BSA. There is no Critical Habitat mapped within the BSA.
Charadrius montanus	mountain plover	--/SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	Absent	Suitable habitat does not exist within the ESL.
Charadrius nivosus nivosus	western snowy plover–Pacific Coast DPS	FT/SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Absent CH Absent	Suitable breeding habitat does not exist within the ESL or BSA. There is no Critical Habitat mapped within the BSA.
Coccyzus americanus	yellow-billed cuckoo–Western U.S. DPS	FT/SE/--	(Nesting) riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Absent CH Absent	Suitable habitat is not present within the ESL or BSA. There is no Critical Habitat mapped within the BSA.
Falco peregrinus anatum	American peregrine falcon	DL/FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Present	Suitable habitat is potentially present within the BSA.

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Haliaeetus leucocephalus	bald eagle	DL/SE, FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Present	Suitable habitat is potentially present within the BSA.
Pandion haliaetus	osprey	--/WL	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Present	There is suitable habitat within the ESL.
Strix occidentalis caurina	Northern spotted owl	FT/ST/--	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris and space under canopy.	Present CH Absent	Suitable habitat is not present within the ESL or BSA; however, is present adjacent to BSA. The nearest NSO detection is 0.5 mile north of the ESL. There is no Critical Habitat mapped within the BSA.
Riparia riparia	bank swallow	--/ST	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Present	Suitable habitat is not present within the ESL; however, species may be present within the BSA. CNDDB lists an historic occurrence for this species with a 5-mile accuracy.

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
FISH					
Entosphenus tridentatus	Pacific lamprey	--/SSC	Found in Pacific Coast streams north of San Luis Obispo County; however, regularly runs in Santa Clara River. Size of runs is declining. Swift-current gravel-bottomed areas for spawning with water temperatures between 53–64°F (12–18°C). Ammocoetes need soft sand or mud.	Present	There is suitable habitat within the BSA.
Eucyclogobius newberryi	tidewater goby	FE/--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches; they need fairly still but not stagnant water and high oxygen levels.	Absent	Suitable habitat does not exist within the BSA.
Lampetra richardsoni	Western brook lamprey	--/SSC	Swift-current, gravel-bottomed areas for spawning with water temperatures between 53–64°F (12-18°C). Ammocoetes need soft sand or mud.	Present	There is suitable habitat within the BSA.
Oncorhynchus clarkii clarkii	Coastal cutthroat trout	--/SSC	Small coastal streams from the Eel River to the Oregon border. Small, low gradient coastal streams and estuaries. Needs shaded streams with water temperatures <64°F (<18°C), and small gravel for spawning.	Present	There is suitable habitat within the BSA.

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Oncorhynchus kisutch (pop. 2)	coho salmon–Southern Oregon/ Northern California Coast (SONCC) ESU	FT/ST	Federal listing refers to populations between Cape Blanco in Oregon and Punta Gorda in Humboldt County, California. State listing refers to populations between the Oregon border and Punta Gorda, California.	Present CH Present	There is suitable habitat within the BSA. Critical Habitat exists within the BSA.
Oncorhynchus mykiss irideus (pop. 16)	Steelhead–Northern California (NC) DPS	FT/--	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.	Present CH Absent	There is suitable habitat within the BSA. There is no Critical Habitat mapped within the BSA.
Oncorhynchus mykiss irideus (pop. 36)	summer-run steelhead trout	--/SCE, SSC	Northern California coastal streams south to Middle Fork Eel River. Within range of Klamath Mountains Province DPS and Northern California DPS. Cool, swift, shallow water and clean loose gravel for spawning and suitably large pools in which to spend the summer.	Absent	There is no suitable habitat within the BSA.
Oncorhynchus tshawytscha (pop. 17)	Chinook salmon–California Coastal (CC) ESU	FT/--	Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Creek in Humboldt County and Russian River in Sonoma County.	Present CH Present	There is suitable habitat within the BSA. Critical Habitat exists within the BSA.
Spirinchus thaleichthys	longfin smelt	FC/ST	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 parts per thousand (ppt) but can be found in completely fresh water to almost pure sea water.	Absent	There is no suitable habitat within the BSA.

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Thaleichthys pacificus	eulachon Southern DPS	FT/--	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.	Absent	There is no suitable habitat within the BSA.
MAMMALS					
Antrozous pallidus	Pallid bat	--/SSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Present	There is suitable foraging habitat within the BSA; however, there are no ideal roosting sites within the BSA.
Arborimus pomo	Sonoma tree vole	--/SSC	Coastal forests in mature, old-growth forests of Douglas-fir, redwood, or montane hardwood-conifer species. Prefers larger trees with greater canopy cover and wide limbs to support nests.	Present	Suitable habitat is present adjacent to the BSA, however does not exist within the ESL or BSA. CNDDB lists an historic occurrence for this species within the BSA with a 0.4 mile accuracy
Bassariscus astutus	Ringtail	--/FP	A mixture of forest and shrubland in close association with rocky areas or riparian habitats. Dens in rock recesses, hollow trees, logs, snags, abandoned burrows, or woodrat nests at low to middle elevations. Usually not found more than 0.6 mile (1 km) from permanent water.	Present	Suitable habitat is present adjacent to the BSA but does not exist within the ESL.

Scientific Name	Common Name	Status** USFWS/ CDFW	General Habitat Description	Habitat Present/ Absent/ CH	Potential for Occurrence and Rationale
Corynorhinus townsendii	Townsend's big-eared bat	--/SSC	Primarily roosts in caves and cave-like roosting habitat, such as tunnels and mines. Very sensitive to disturbances and may abandon a roost after one on-site visit. Also reported to use bridges and hollow trees as roost sites. Ranges in low to mid-elevation mixed conifer forests.	Present	Suitable habitat is present adjacent to the BSA but does not exist within the ESL or BSA. CNDDB lists an historic occurrence for this species within the BSA with a 1-mile accuracy.
Martes caurina humboldtensis	Pacific (Humboldt) marten	FT/SE, SSC	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. Associated with late-successional coniferous forests, prefer forests with low, overhead cover.	Present	No suitable denning habitat exists in the ESL. Suitable foraging habitat may exist adjacent to the BSA; however, the project location is outside the current range of this species. CNDDB lists an historic occurrence for this species within the BSA with a 1-mile accuracy.
Pekania pennanti	Pacific fisher–West Coast DPS	--/SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. They utilize cavities, snags, logs and rocky areas for cover and denning.	Present	Suitable denning habitat is may be present adjacent to the BSA, however does not exist within the ESL or BSA.
INVERTEBRATES					
Danaus plexippus	Monarch butterfly	FC/--	Overwinters in sites with specific microclimate conditions, including dappled sunlight, high humidity, wind protection, and an absence of freezing temperatures or high winds. Requires nectar sources nearby, primarily milkweed.	Present	Potentially present. No milkweed (nectar source) was observed within the ESL.

(Status definitions next page)

Federal

--	=	No status definition.
FE	=	Endangered.
FPT	=	Proposed for federal listing as threatened under the Federal Endangered Species Act.
FT	=	Listed as threatened under the Federal Endangered Species Act.
FC	=	Candidate for Federal listing (taxa for which the U.S. Fish and Wildlife Service has sufficient biological information to support a proposal to list as Endangered or Threatened).
DL	=	Delisted.
FSC	=	Species of Concern (Species of Concern is an informal term. It is not defined in the Federal Endangered Species Act. The term commonly refers to species that are declining or appear to be in need of conservation).

State

--	=	No status definition.
SE	=	Listed as endangered under the California Endangered Species Act.
ST	=	Listed as threatened under the California Endangered Species Act.
SC	=	Proposed for state listing as threatened under the California Endangered Species Act.
FP	=	Fully protected, species may not be taken or possessed without a permit from the Fish and Game Commission and/or the CDFW.
SSC	=	Species of Special Concern.
WL	=	Watch List that includes “Taxa to Watch”.

Sources: CNPS 2022; CDFW–CNDDB 2022b; USFWS 2022

Western Pond Turtle

Western pond turtle (*Emys marmorata*) is a state Species of Special Concern (SSC). They are found near permanent ponds, lakes, streams, and irrigation ditches. They favor habitats with large numbers of emergent logs or boulders, where they gather to bask. Females typically move on land for up to 100 feet to find suitable nesting sites for egg laying. Eggs are laid from March to August and incubate underground for approximately 75 days. Eggs are typically deposited in nests constructed in sandy banks along large slow-moving streams, although nests have been observed in many soil types as far as 325 feet from water.

No species-specific surveys were conducted for western pond turtle. This species was not observed during field surveys; however, habitat does exist at Yager Creek and downstream of Ward Creek in the Van Duzen River. The CNDDB RareFind database shows the nearest detection approximately 1 mile north of the project area in Yager Creek observed in 2006 (CDFW 2022).

Northern Red-legged Frog

Northern red-legged frog (NRLF) (*Rana aurora*) is a SSC that occurs along the California Coast Ranges from Del Norte County to Mendocino County, usually below 3,936 feet. NRLF use ephemeral, intermittent, and perennial creeks and streams, reservoirs, springs, wetlands, and man-made impoundments as breeding habitat and aquatic non-breeding habitat (CDFW 2022). Upland dispersal habitats are primarily utilized by NRLF in dispersal events, which can be triggered by both periods of wet weather and dry weather when breeding pools and other occupied aquatic habitats dry up and are no longer suitable (CDFW 2018).

NRLF likely require rains for dispersal; individuals have been found considerable distances from breeding sites on rainy nights. This frog is highly aquatic and prefers shorelines with extensive vegetation. NRLF breed from January to July and require permanent or nearly permanent pools for larval development. Intermittent streams must retain surface water in pools year-round for frog survival.

No species-specific surveys were conducted by Caltrans biologists. However, there is suitable habitat within the ESL. Three adult NRLF were observed at Ward Creek in summer of 2021 and 2022.

Foothill Yellow-legged Frog (Northwestern California clade)

Foothill yellow-legged frog (FYLF) (*Rana boylii*), Northwest/Northcoast California clade, is a SSC and was a candidate for state-threatened listing. CDFW made the decision in March of 2020 to list five of the six distinct clades of this species. It was determined that the Northwest/Northcoast clade of this species was not warranted for listing. The project falls within the range of this clade.

The species is characteristically found close to water in association with perennial streams and ephemeral creeks that retain perennial pools through the end of summer. Adults preferentially utilize shallow edgewater areas with low water velocities for breeding and egg laying, usually characterized by gravel, cobble, and boulder substrate. Reproduction occurs in aquatic environments, however mating and egg-laying occurs exclusively in streams and rivers (not in ponds or lakes). This occurs from April until early July, after streams have slowed from winter runoff. Juvenile and non-breeding adult frogs may be found adjacent to riffles, cascades, main channel pools, and plunge pools that provide escape cover. During cold weather, individuals seek cover under rocks in the streams or on shore within a few feet of water.

The CNDDB Rarefind database reports this species has been detected at Yager Creek as well as numerous locations throughout the Van Duzen watershed. No FYLF individuals were observed during site visits at Ward Creek. It is more likely that FYLF would move downstream to the Van Duzen River during the spring and summer to breed and lay their egg masses.

Cooper's Hawk and Sharp-shinned Hawk

The Cooper's hawk (*Accipiter cooperii*) and sharp-shinned hawk (*Accipiter striatus*) are considered "taxa to watch" by CDFW due to their former inclusion on species of special concern lists. While they have demonstrated population declines, they are still fairly common and widespread in the state and are currently at a low risk of extinction.

Cooper's hawks reside in mature forest, open woodlands, wood edges, and river groves. Cooper's hawks nest in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby. They are also found among trees along rivers through open country, and increasingly in suburbs and cities where some tall trees exist for nest sites.

Sharp-shinned hawks breed in deep forests with closed canopies in a wide range of elevations from sea level to the treeline. During migration, they prefer open habitats or fly high in the sky, migrating along ridgelines. In Humboldt County, sharp-shinned hawks are year-round residents. They favor conifer trees for nesting sites.

No species-specific surveys were performed for these species. Cooper's hawks and sharp-shinned hawks occur throughout the Van Duzen and greater Eel River watershed. The CNDDB Rarefind database shows the nearest recorded Cooper's hawk observation approximately 2.4 miles southwest of the project ESL in 2002 (CDFW 2022). The CNDDB Rarefind database shows the nearest recorded sharp-shinned hawk observation approximately 4.4 miles north of the project ESL in 2005 (CDFW 2022). Suitable foraging habitat is present within the BSA. No Cooper's hawks or sharp-shinned hawks, or their nests, were observed within the ESL or BSA during the 2021 and 2022 field surveys.

Grasshopper Sparrow

Grasshopper sparrow (*Ammodramus savannarum*) is a state SSC. It has a wide range across the North American continent, therefore its habitat requirements are variable, depending on location. On the California coast, this species is found in pastures between forested areas. Grasshopper sparrows eat grasshoppers and plant seeds, foraging mostly on the ground and in low vegetation. This species builds well-concealed nests that are domed with grasses, and enter from the side.

No species-specific surveys were performed for this species. CNDDB lists one observation approximately 7 miles northwest of the project, west of Fortuna. Suitable foraging habitat is present within the BSA. No observations from eBird were found within one mile of the project. No grasshopper sparrows or their nests were observed within the BSA during field reviews.

American Peregrine Falcon

American peregrine falcon (*Falco peregrinus*) is a CDFW Fully Protected species. Nesting in northern California may begin in March, with young leaving the nest by early July. Although peregrine falcons often nest on cliff faces, they will select a wide variety of other structures for nest sites, including buildings, bridges, and electrical transmission structures. They do not build nests, but tend to lay eggs in simple scrapes off cliffs, in abandoned nests of other large birds, or sometimes in hollows of broken-off tree snags.

No species-specific surveys were performed for this species. CNDDB lists one observation approximately 2 miles south of the project. The eBird database lists four detections within 1 mile of the project area (eBird 2022). No suitable nesting trees are present within the BSA. No peregrine falcons or their nests were observed within the BSA during field reviews.

Osprey

Osprey (*Pandion haliaetus*) are treated as "taxa to watch" by CDFW due to their former inclusion on special concern lists. Nests are usually built on snags, treetops, or crotches between large branches and trunks, on cliffs or human-built platforms. Nests are placed in open surroundings for easy approach and elevated for safety from ground predators.

Ospreys occur throughout the Van Duzen and greater Eel River watershed. No species-specific surveys were performed for this species. There is suitable habitat within the ESL. The eBird database lists a detection within two miles of the project area (eBird 2022). No ospreys or their nests were observed within the BSA during field reviews.

Pacific Lamprey and Western Brook Lamprey

Pacific lamprey (*Entosphenus tridentatus*)and Western brook lamprey (*Lampetra richardsonii*) are state SSCs. Lamprey ammocoetes (the larval stage) start life under gravel in freshwater streams. After a few weeks they emerge, usually at night, and drift downstream until they find a low-velocity backwater filled with silt or mud where they burrow and live as filter feeders for up to seven years.

Pacific lamprey are anadromous fish (born in freshwater streams, migrate out to the ocean, and return to fresh water as mature adults to spawn). As adults in the ocean, Pacific lamprey are parasitic and feed on the body fluids and blood of marine fishes.

Western brook lamprey (*Lampetra richardsonii*) spend their entire lives in freshwater, eating algae and other micro-organisms. This species does not feed in the adult stage.

Focused surveys for Pacific lamprey and Western brook lamprey were not conducted for the proposed project. Suitable habitat exists within the BSA. Lampreys were not observed during the field surveys at Ward Creek. Within the BSA, they may be present within Yager Creek and Wilson Creek.

Coastal Cutthroat Trout

Coastal cutthroat trout (*Oncorhynchus clarkii clarkii*) is a state SSC. Most of the cutthroat trout in California, including the non-spawning fish, return to fresh water during the winter or high flow months and hide in pools with complex forms of cover. Anadromous populations may live in fresh water for up to five years before leaving for the ocean. In their freshwater stages, cutthroat trout generally live in small low-gradient, well-oxygenated streams with cool water temperatures.

Juvenile fish are opportunistic feeders that rely mostly on benthic and drift insects. As freshwater cutthroat trout get larger, they go from being the possible prey of other salmonids to the potential predators of other salmonids, insects, and crustaceans. Anadromous cutthroat trout enter streams to breed with the first high flow between August and October. In California, fry emerge from eggs in March–June after six or seven weeks of incubation and a short amount of time spent as an alevin within the safety of the gravel.

Focused surveys for cutthroat trout were not conducted for the proposed project. There is suitable habitat within the BSA. No cutthroat trout were observed during the field surveys at Ward Creek, and the intermittent condition makes it unsuitable for cutthroat. Within the BSA, they may be present in Yager Creek or Wilson Creek.

Pallid Bat and Townsend's Big-eared Bat

In the mild northern California coastal climate, bats are present year-round. There are 25 bat species that occur in California; 14 species of bats are either considered Species of Special Concern (SSC) by CDFW or are currently proposed for such status.. Additionally, the Forest Service and Bureau of Land Management list some species as sensitive and the Western Bat Working Group lists some as high priority for consideration of conservation measures. Under CEQA, state agencies, local governments, and special districts are required to evaluate and disclose impacts from projects in the state. California Fish and Game Code Section 4150 provides further protection to bats (non-game mammals) from take or possession. Disturbances by humans, especially in hibernacula[3] and maternity roosts, are a serious threat to most of the species.

[3] A shelter occupied during the winter; hibernation may or may not occur.

All 25-bat species that occur in California use one or more natural features or anthropogenic structures (e.g., barns, bridges) for roosting and 15 species are known to use bridges. Bats also forage in habitats near bridges, such as riparian communities and open water, and along transportation corridors (e.g., roadside tree canopies).

Bridges are the transportation structures most commonly associated with bat species. Bats use bridge cavities for roosting during the day and for bearing and rearing young (e.g., maternal roost) typically from February through August. They may also use bridges in winter as hibernacula. At night, bats often roost in the open on the concrete undersides of bridges. Night roosts, which are used from approximately sunset to sunrise, are sites where animals congregate to rest and digest their food between foraging bouts. Night roosts also serve as important stopping points during migration and appear to have a social function.

In addition to bats roosting inside or on bridge structures, bats can roost in culverts, on rocky banks, or in nearby trees such as those in adjacent riparian habitat. Buildings and other structures that are adjacent to a transportation project may also provide potential habitat for crevice or cavern roosting species.

Two species of bats considered to be SSC by CDFW were documented within the nine-quad database searches: pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinus townsendii*). These species could potentially occur within the project limits.

Within the project limits, the CNDDB RareFind database shows an historic observation of the Townsend's big-eared bat with a 1-mile accuracy (CDFW 2022). Suitable habitat for Townsend's big-eared bat is present adjacent to the BSA but does not exist within the ESL or BSA. There is suitable foraging habitat for pallid bat within the BSA; however, there are no ideal roosting sites within the BSA.

Trees and bridges in the immediate vicinity of the project area were inspected for cavities, guano accumulations, staining, and observable crevices. During a daytime field review on November 10, 2021, the bridge deck underneath Yager Creek Bridge contained evidence of night roosts with signs of guano and urine staining; however, no bats were observed. No other evidence of bats was found.

Sonoma Tree Vole

Sonoma tree vole (*Arborimus pomo*) is a CDFW SSC distributed along the northern coast of California from Sonoma County to the Oregon border, generally restricted to the fog belt. It is reported to be rare to uncommon throughout its range, but the difficulty of locating nests

and capturing individuals makes abundance difficult to assess. Sonoma tree voles occur in old-growth and other forests, mainly Douglas-fir, redwood, and montane mixed hardwood-conifer habitats.

Sonoma tree voles feed on needles of Douglas-fir (*Pseudotsuga menziesii*) and grand fir (*Abies grandis*). Needles and twigs are gathered primarily at night and are either consumed on-site or brought to the nest where the needle resin ducts are removed, and the remainder is eaten. Young, tender needles are often eaten entirely.

Nest cups of Douglas-fir needles are constructed in trees, preferably tall trees. In young second-growth Douglas-fir, the broken tops of trees frequently are used for nesting. The Sonoma tree vole breeds year-round, but most breeding is from February through September. Northern spotted owls (*Strix occidentalis caurina*) are the main predators of Sonoma tree voles throughout the geographical distribution.

No species-specific surveys were performed for this species. Suitable habitat is present adjacent to the BSA but does not exist within the ESL or BSA. CNDDB RareFind reports the closest detection of Sonoma tree vole approximately 0.4 mile northeast from the ESL (CDFW 2022). This occurrence was noted on a southwest facing slope and was observed in 1993.

Ringtail

Ringtail *(Bassariscus astutus*) is a CDFW Fully Protected mammal. It is a member of the raccoon family (*Procyonidae*) that may be found in fragmented and disturbed areas and will den inside buildings and other manmade structures. In northwestern California, ringtails tend to select rest sites near steep slopes and water sources. They frequently change rest sites, although some may be revisited regularly. Most litters are born in May or June, with young beginning to forage outside the den site after two months. Dens can be in rock crevices, living and dead hollow trees, logs, brush piles, buildings, and other manmade structures. Female ringtails may regularly move young between dens.

No species-specific surveys were conducted for this species. No CNDDB occurrence information is available as CNDDB does not track ringtail observations (CNDDB 2022). Suitable habitat is present adjacent to the BSA, however does not exist within the ESL. No potential natal dens were observed within the ESL; however, potential den sites are present within the BSA.

Pacific Fisher–West Coast DPS

The Pacific fisher (*Pekania pennanti*)–West Coast DPS is a SSC and some California populations are regulated as federally endangered and state threatened. The 20160420 FGC Notice of Findings stated that the Pacific fisher Southern Sierra ESU (defined as California south of the Merced River) warranted listing as threatened, while the Northern California ESU does not currently warrant listing. The project would occur within the range of the Northern California ESU of Pacific fisher.

The fisher is one of the larger members of the weasel family (Mustelidae) and is an opportunistic, generalist predator with a diverse diet, including mammalian and avian prey, ungulate carrion, vegetation, insects, and fungi. Fisher are known to occur in coniferous forest in the coastal ranges of northern California, including second growth and old-growth redwood forest, with a possible preference for stands with structural complexity, diversity, and large logs and snags for resting and denning. The fisher requires intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. They require large areas of mature, structurally complex, conifer and mixed conifer hardwood forest and occupy home ranges that can exceed 14,826 acres. Fishers are generally solitary animals, except during the breeding season. They mate between February and May (usually late March) and give birth the following March.

The CNDDB RareFind database (CDFW 2022) shows the nearest fisher detection approximately 1.7 miles north of the project area. Protocol-level surveys were not performed for this species. The ESL was surveyed for trees suitable for fisher resting habitat and maternity den sites. Trees suitable for fisher den sites include conifers greater than 22 inches DBH and hardwoods greater than 18 inches DBH, not smaller trees. Day resting sites could include branches, platforms, and cavities of live trees. Suitably sized trees with the following characteristics were considered as potential fisher den sites:

- Any broken-topped tree with a minimum diameter at the break of 18 inches or larger
- Trees with one or more limbs 12 inches or greater in diameter
- Trees with a cavity (or void within a tree bole or large limb), with a relatively small opening; includes all cavities with entrances 2.5 to 6 inches across the smallest direction (for example, a vertical slit-like opening 4 inches across would count, as would a more circular entrance).

The BSA most likely contains suitable habitat (e.g. potential day resting locations and large hollow redwoods with suitable denning cavities); however, there are no potential den structures or day resting locations within the ESL where work would be conducted. Fishers are nocturnal and do not often interact with humans. They would likely be absent from otherwise suitable habitat within the ESL due to high levels of human disturbance, such as areas bordering roads, trails, active agriculture, and human habitation. No signs of fisher occupation were observed, and no trees with suitable denning habitat would be removed.

THREATENED AND ENDANGERED SPECIES

Marbled Murrelet

Marbled murrelet (MAMU) (*Brachyramphus marmoratus*) is a federally threatened and state endangered species. The MAMU is a small Pacific seabird that breeds along the Pacific coast of North America from the Aleutian Archipelago and southern Alaska south to central California. In the Pacific Northwest (Washington, Oregon, and California), they have a unique life history strategy in that they feed primarily in nearshore marine waters (within a few miles of shore), flying inland to nest in mature conifers. Nesting habitat is primarily associated with large tracts of old-growth forest, typically within 50 miles from shore, characterized by large trees, a multistoried stand, and moderate to high canopy closure. They are commonly absent from stands less than 60 acres in size.

Nests in the Pacific Northwest are typically found in the largest diameter old-growth tree available in the stand. Nests are not built, but an egg is laid in a depression of moss or other debris on the limb of a large conifer. Suitable nest structures include large mossy horizontal branches, mistletoe (*Phoradendron* spp.) infections, witches'-brooms (structural deformities of the tree), and other such structures. During the March to September breeding season, MAMU typically fly along river corridors for their morning and evening nest visits.

No protocol surveys to observe and record MAMU were conducted by Caltrans at this location. The nearest recorded CNDDB observation is from 1930 and is approximately 0.5 mile north of the project area (CDFW 2022). Suitable habitat and critical habitat are not present within the ESL or BSA.

Bald Eagle

Though the bald eagle (*Haliaeetus leucocephalus*) was delisted from federal status, it is still considered state endangered. Bald eagles also remain federally protected by the Bald and Golden Eagle Protection Act (16 USC § 668). Bald eagles typically nest in live trees within one mile of fishable waters, some with dead tops, and build a large (~6-foot/1.8-meter diameter), generally flat-topped and cone-shaped nest usually below the top with some cover above the nest. Bald eagle nest trees in northern California are commonly 100 feet tall, average 43-inch DBH, and have an unobstructed view of a water body. The active breeding season occurs February through August. In Humboldt County, bald eagles are strongly tied to open water and undisturbed shorelines. River corridors and estuaries attract scattered individuals thought to be migrants, or otherwise nonresident, from October to March.

No species-specific surveys were performed for this species. Suitable habitat is potentially present within BSA. CNDDB lists one observation approximately five miles northwest of the project area. The eBird database lists two detections within two miles of the project area (eBird 2022). No bald eagles or their nests were observed within the BSA during field reviews.

Northern Spotted Owl

The northern spotted owl (NSO) (*Strix occidentalis caurina*) is a federal and state threatened species. NSOs generally have large home ranges and use large tracts of land containing significant acreage of older forest to meet their biological needs. The attributes of superior NSO nesting and roosting habitat typically include:

- a moderate-to-high canopy closure (60 to 80 percent)
- a multi-layered, multi-species canopy with large overstory trees
- a high incidence of large trees with deformities (large cavities, broken tops, mistletoe infections, and debris accumulation)
- large accumulations of fallen trees and other debris
- sufficient open space below the canopy for flight

In redwood forests and mixed conifer-hardwood forests along the coast of northwestern California, considerable numbers of NSO also occur in young forest stands (USFWS 2011). NSOs tend to select broken-top trees and cavities in older forests for nest sites, although they also use existing platforms, such as abandoned raptor nests, squirrel nests, mistletoe brooms,

and debris piles. Courtship initiates in February or March with the first eggs laid in late March through April. Fledglings generally leave the nest in late May or in June but continue to be dependent on their parents into September until they are able to fly and hunt on their own. By September, juveniles have left their natal area.

No species-specific surveys were performed for NSO. According to the CNDDB RareFind database, the closest positive detections to the project site are 0.53, 0.56 and 0.65 mile away from the project area and dated between 2017, 2016, and 2002, respectively (CDFW 2022). The nearest NSO activity center was last surveyed in 2018 and is approximately 0.53 mile to the north of the project area, adjacent to the BSA. However, potential NSO habitat is not present within the ESL or BSA (personal communications Greg Schmidt, USFWS liaison). There is no Critical Habitat for NSO mapped within the BSA.

Bank Swallow

The bank swallow (*Riparia riparia*) is a state threatened species that requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, or ocean to dig nesting holes. The species is considered a colonial breeder with colonies that range in size from 10 to 1,500 nesting pairs. The species forages by hawking insects during long, gliding flights predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland.

No species-specific surveys were performed for this species. Within the project limits, CNDDB lists a 1946 occurrence with a five-mile-accuracy. Bank swallows were not observed within the project ESL. Nesting habitat for this species was not observed within the project ESL or BSA.

Coho Salmon – Southern Oregon/Northern California Coast ESU

The Southern Oregon/Northern California Coast (SONCC) coho salmon (*Oncorhynchus kisutch*) Evolutionarily Significant Unit (ESU) (pop. 2) is listed as federally threatened and state threatened. This ESU includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon, and Punta Gorda (Humboldt County), California, as well as coho salmon produced by three artificial propagation programs. The SONCC ESU is listed as threatened at both the state and federal levels.

NMFS published its final decision to list the SONCC ESU of coho salmon as threatened under the FESA on May 6, 1997 (62 FR 24588), a status that was reaffirmed on August 15, 2011 (76 FR 50447). Critical habitat for the SONCC coho salmon was designated in 1999 (64 FR 24049). This project is within designated critical habitat for SONCC coho salmon.

In the Eel River watershed, including the Van Duzen River, spawning occurs from December to February. Spawning is predominantly confined to the upper South Fork and its tributaries, and lower tributaries of the mainstem Eel and Van Duzen rivers. Fry emergence takes place between March and July, peaking between March and May. Juveniles typically feed and rear within the streams of their natal watershed for a year before migrating to the ocean. Coho salmon rearing areas include lakes, sloughs, side channels, estuaries, beaver ponds, low-gradient tributaries to large rivers, and large areas of slack water.

Two Sacramento pikeminnow (*Ptychocheilus grandis*) were observed at the Ward Creek inlet pool on April 26, 2022, and May 23, 2022, after late spring rains. While no salmonids were observed at this location, there is suitable habitat within the BSA.No salmonids were were observed at this location. Based on available stream inventory reports (CDFG 2010), salmonids are presumed present at Yager Creek and Wilson Creek. Critical habitat for this species exists within the BSA.

Steelhead Trout – Northern California DPS

The steelhead trout (*Oncorhynchus mykiss irideus*)–Northern California (NC) Distinct Population Segment (DPS) (pop. 16) is a federally threatened species. This DPS includes all naturally spawned anadromous steelhead populations below natural and manmade impassable barriers in California coastal river basins from Redwood Creek southward to, but not including, the Russian River, as well as some state and federal propagation programs. Immature steelhead that return to fresh water after only spending a few months in the ocean (half-pounder) also occur within the range of this DPS, specifically in the Mad River and Eel River.

Most steelhead enter the river between August and June and spawn between December and April, peaking in January. Depending on water temperature, steelhead eggs hatch in 1.5 to 4 months. Alevins emerge from the gravel as young juveniles and begin actively feeding. Juvenile steelhead rear in fresh water from one to four years, then migrate to the ocean as smolts. Low flow conditions can hinder migration of adult summer steelhead, causing them to over-summer in suboptimal, warmer habitats. This project is within dDesignated critical habitat for steelhead-NC DPS exists within the BSA.

Two Sacramento pikeminnow (*Ptychocheilus grandis*) were observed at the Ward Creek inlet pool on April 26, 2022, and May 23, 2022, after late spring rains. While no salmonids were observed at this location, there is suitable habitat within the BSA. According to a 2003 Fish Passage Study, Ward Creek was once presumed to have steelhead. Based on available stream inventory reports (CDFG 2010), salmonids are presumed present at Yager Creek and Wilson Creek. There is no critical habitat for this species mapped within the BSA.

Chinook Salmon – California Coastal ESU

The Chinook salmon (*Oncorhynchus tshawytscha*)–California Coastal (CC) ESU (pop. 17) is federally listed as threatened. Chinook salmon, also known as king salmon, have a life history similar to Southern Oregon/Northern California Coast (SONCC) coho salmon but adults are easily distinguished from other salmon species by their large size, with some individuals growing to more than 100 pounds.

Chinook salmon spawn in November and December, depending on rainfall patterns. The female lays eggs for the male to fertilize in the gravel river bottom, with the adults dying soon after. After they hatch, Chinook salmon fry seek out areas behind fallen trees, back eddies, undercut banks, and other areas of bank cover. Once juveniles descend from their freshwater natal streams, they likely use the estuary in the winter and spring as a transition before ocean entry. This project is within designated critical habitat for CC Chinook salmon.

Two Sacramento pikeminnow (*Ptychocheilus grandis*) were observed at the Ward Creek inlet pool on April 26, 2022, and May 23, 2022, after late spring rains. Pike minnow prey upon salmonid eggs. Based on available stream inventory reports (CDFG 1991), salmonids are presumed present at Yager Creek and Wilson Creek. Critical habitat for this species exists within the BSA.

Pacific (Humboldt) Marten

The Pacific (Humboldt) marten (*Martes caurina humboldtensis*) is a federally threatened and state endangered species. It is a carnivorous mammal that historically occupied the coastal mountains of California from Sonoma County north to the Oregon border. Currently, the Pacific (Humboldt) marten is known only from southern Del Norte County and northern Humboldt County, which is less than 5 percent of its historic range. Pacific (Humboldt) marten are associated with late successional conifer stands with dense shrub layers and abundant downed-tree structures used for resting, denning, and escape cover. They are also associated with variable tree cover, dense shrubs, and rock piles and rock outcrops used for resting, denning, and escape cover.

Natal and maternal dens would likely be occupied from late March or April, when females give birth until the young disperse in late summer or autumn. This project is outside the current known population distribution (personal communication Greg Schmidt, USFWS liaison).

The CNDDB RareFind database (CDFW 2022) shows the nearest recorded location of Pacific (Humboldt) marten within project limits with a 1-mile accuracy. However, this observation date is from 1913, and represents the historic range of this species. Protocol-level surveys were not performed for this species due to the project being outside the current known range, as well as a lack of suitable habitat. Any trees that would be removed do not provide suitable denning habitat for marten (personal communication Greg Schmidt, USFWS liaison).

Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is currently a candidate for federal listing and has recently been classified as endangered by the International Union for Conservation of Nature (IUCN) on July 22, 2022. Monarch butterflies are found across North America where suitable feeding, breeding and overwintering habitat exists. Overwintering habitats have specific microclimate conditions, including dappled sunlight, high humidity, wind protection, and an absence of freezing temperatures or high winds. They require nectar sources nearby, primarily milkweed. Monarch butterflies are considered occasional migratory visitors to Humboldt County.

No specific surveys were conducted for the monarch butterfly. According to the Western Monarch Milkweed Mapper, no direct observations of butterflies or milkweed have been recorded within the BSA. Monarch butterflies and milkweed (nectar source) were not observed within the ESL during botanical surveys. The ESL does not contain overwintering habitat.

INVASIVE SPECIES

Executive Order 13112 requires federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem, whose introduction does or is likely to cause economic or environmental harm or harm to human health." The Federal Highway Administration (FHWA) guidance issued August 10, 1999, directs the use of the state's invasive species list, maintained by the California Invasive Species Council, to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

Introduction and naturalization of non-native species is one of the greatest threats to global biodiversity. The Van Duzen River watershed contains several invasive plant species that adversely affect ecologic functions. Some of the species that most threaten native ecosystem function and structure include giant reed (*Arundo donax*), velvet grass (*Holcus lanatus*), yellow star-thistle (*Centaurea solstitialis*), flatweed (*Hypochaeris radicata*), Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), and red sorrel (*Rumex acetosella*). Table 7 lists the invasive plant species identified by the United States Department of Agriculture (USDA) and California Invasive Plant Council (Cal-IPC) for the state of California that are known to occur within the ESL (USDA 2022; Cal-IPC 2022).

Table 7. Invasive Species Occurring within the ESL

Scientific Name	Common Name	USDA State Noxious Status	Cal-IPC Rating*
Avena barbata	Slender wild oat	None	Moderate
Brassica rapa	Field mustard	None	Moderate
Briza maxima	Rattlesnake grass	None	Limited
Bromus diandrus	Ripgut grass	None	Moderate
Bromus hordeaceus	Soft chess grass	None	Limited
Carduus pycnocephalus	Italian thistle	None	Moderate
Cirsium arvense	Canada thistle	BW	Moderate
Cortaderia jubata	Purple pampas grass	None	High
Cynosurus echinatus	Bristly dogtail grass	None	Moderate
Cytisus scoparius	Scotch broom	None	High
Erodium cicutarium	Redstem filaree	None	Limited

Scientific Name	Common Name	USDA State Noxious Status	Cal-IPC Rating*
Dipsacus fullonum	Wild teasel	None	High
Festuca arundinacea	Tall fescue	None	Moderate
Foeniculum vulgare	Fennel	None	High
Hedera helix	English ivy	None	High
Hirschfeldia incana	Mediterranean mustard	None	Moderate
Holcus lanatus	Common velvet grass	None	Moderate
Hordeum murinum	Wall barley	None	Moderate
Hypochaeris radicata	Rough cat's ear	None	Moderate
Leucanthemum vulgare	Ox-eye daisy	None	Moderate
Plantago lanceolata	English plantain	None	Limited
Ranunculus repens	English ivy	None	High
Raphanus sativus	Wild radish	None	Limited
Rubus armeniacus	Himalayan blackberry	None	High
Rumex acetosella	Red sorrel	None	Moderate
Rumex crispus	Curly dock	None	Moderate
Torilis arvensis	Tall sock-destroyer	None	Moderate
Vinca major	Greater periwinkle	None	Moderate

Cal-IPC Ratings

High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate – These species have substantial and apparent, but generally not severe, ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited – These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Code	**Noxious Status**
AW	A list (noxious weeds)
BW	B list (noxious weeds)

Discussion of CEQA Environmental Checklist Question 2.4a)—Biological Resources

a) Would the project 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, U.S. Fish and Wildlife Service, or NOAA Fisheries/NMFS?

PLANT SPECIES

The following listed plant species were either outside the known elevation range, had no suitable habitat, and/or were not observed within the ESL; therefore, there would be no impact to these special status plant species.

- Beach layia *(Layia carnosa)* – FT/SE
- Western lily *(Lilium occidentale)* – FE/SE
- Kneeland Prairie pennycress *(Noccaea fendleri* ssp. *Californica)*–FE

Crinkled Rag Lichen

The proposed project would have minimal impact on the lichen with incorporation of the Standard Measures and Best Management Practices identified in Section 1.4 of this document (Caltrans 2022d). also

Presence of this species is assumed. If found during surveys, Caltrans would consult with CDFW to ensure that appropriate measures would be taken to minimize impacts (such as transplanting, relocating, or propagation).

ANIMAL SPECIES

Western Pond Turtle

The proposed project would have minimal impact on Western pond turtle with incorporation of the Standard Measures and Best Management Practices (Section 1.4), which include the implementation of an Aquatic Species Relocation Plan.

Due to the timing of work, temporary nature of construction, standard measures, avoidance and minimization measures, and the abundance of suitable habitat in the project vicinity to

which Western pond turtle could relocate, if necessary, the species is not expected to be affected.

Therefore, Caltrans has determined the project would have "***no impact***" to Western pond turtle.

Northern Red-legged Frog

The proposed project would have minimal impact on Northern red-legged frog with incorporation of the Standard Measures and Best Management Practices identified in Section 1.4, which includes the implementation of an Aquatic Species Relocation Plan.

Due to the temporary nature of construction, and the abundance of suitable habitat in the project vicinity for which frogs could relocate if necessary, the impacts to Northern red-legged frog from this project would be minimal.

Therefore, Caltrans has determined the proposed project would have a "***less than significant impact***" on Northern red-legged frog.

Foothill Yellow-legged Frog (Northwestern California clade)

Egg masses are not likely to be encountered in Ward Creek during construction, but it is likely that adults or juveniles may be present. Due to the temporary nature of construction and the abundance of suitable habitat near the project where frogs could relocate if necessary, impacts to Foothill yellow-legged frog (FYLF) from this project would be minimal. However, preconstruction surveys and relocation of this species would be required at all active construction areas and areas that may result in effects to FYLF (Section 1.4—Standard Measures and Best Management Practices).

Therefore, Caltrans has determined the proposed project would have a "***less than significant***" impact to Foothill yellow-legged frog–Northwestern California clade.

Cooper's Hawk and Sharp-shinned Hawk

Pre-construction nest surveys would be conducted to identify any new Cooper's hawk or sharp-shinned hawk nests near project activities and to provide opportunity to develop appropriate avoidance measures if present.

Because nest removal would not be associated with this project, and any trees that would be removed do not provide suitable nesting habitat for either hawk, Caltrans determined the project would have "***no impact***" to Cooper's hawk or sharp-shinned hawk, or their habitat.

Grasshopper Sparrow

Pre-construction nest surveys would be conducted to identify any grasshopper sparrow nests near project activities and to provide opportunity to develop appropriate avoidance measures if present.

Therefore, Caltrans has determined the project would have "***no impact***" to grasshopper sparrow.

American Peregrine Falcon

Tree removal would be conducted following the Standard Measures and Best Management Practices described in Section 1.4. Trees proposed for removal are not considered nesting trees due to the lack of suitable nest structures that could support peregrine falcon nests. No suitable nesting trees exist within the project footprint. Thus, Caltrans has determined the project would result in no adverse effects on peregrine falcon from auditory or visual disturbance.

Per CESA, the project would not result in ***"take"*** of the peregrine falcon.

Osprey

Because nest removal would not be associated with this project, and any trees that would be removed do not provide suitable nesting habitat for osprey, the proposed work would have no impact on osprey or their habitat. Higher quality perching/resting habitat occurs elsewhere in the watershed along the Van Duzen if osprey were disturbed from the project site due to elevated noise levels during construction.

Pre-construction nest surveys would be conducted to identify any new osprey nests near project activities and to provide opportunity to develop appropriate avoidance measures if present.

Caltrans has determined the project would have "***no impact***" to osprey.

Pacific Lamprey and Western Brook Lamprey

As construction related activities are not proposed below the OHWM in Barber, Yager or Wilson creeks, Caltrans anticipates no impacts to Pacific lamprey and Western brook lamprey.

Given this, Caltrans has determined the project would have "***no impact***" on Pacific lamprey and Western brook lamprey.

Coastal Cutthroat Trout

Caltrans anticipates the result of the project would be beneficial to the species because the removal of the culvert, installation of a bridge, and restoration of natural stream conditions would remove a fish passage barrier.

Ward Creek is the only waterway where in-stream work has been proposed. Construction would take place during the summer months when adult and juvenile salmonids are not expected to be present at this location due to their life history and migration patterns. Water levels would also be low because Ward Creek is seasonal.

Coastal cutthroat trout are not anticipated to be within the BSA during construction. However, if found to be present in Ward Creek when work is occurring, several project activities could negatively affect coastal cutthroat trout. These include temporary impacts from stream diversion and associated fish relocation, noise and visual disturbance, and water quality impacts.

Avoidance and minimization measures, as well as standard measures, would be in-place for federal and state listed species and would be protective to coast cutthroat trout as well. Although the proposed project would have impacts to cutthroat trout, incorporation of the Standard Measures and Best Management Practices identified in Section 1.4, which include the implementation of an Aquatic Species Relocation Plan as well as avoidance and minimization measures proposed for federal and state listed species, would reduce injury and harm to the species by protecting water quality, limiting noise and visual disturbance, and restoring riparian habitat.

Therefore, Caltrans determined the project would have a "***less than significant impact***" to coastal cutthroat trout.

Pallid Bat and Townsend's Big-eared Bat

No known maternity roosts or other colonial night roosts would be removed or altered during project activities. Work being done on top of the Yager Creek Bridge deck would not remove or alter night roosts. Furthermore, all tree removal would occur outside of the maternity season to ensure no impacts would occur to any potentially unidentified maternity roosts.

While trees are planned for removal during this project, bats that may use them as a temporary night roost would not be permanently affected by their removal because plenty of similar habitat is present within and around the project area in the redwood forest.

Given the specific trees to be removed, seasonal timing of the project, and the standard measures to avoid disturbing active colonies, Caltrans has determined the project would have ***"no impact"*** on bat species.

Sonoma Tree Vole

Any trees slated for removal for this project would be adjacent to a highly traveled roadway that would provide low quality habitat and limit use of nesting voles. No Douglas-fir trees are proposed to be removed, which the Sonoma tree vole feeds on almost exclusively.

Caltrans has determined the project would have "***no impact***" to Sonoma tree vole.

Ringtail

This project would not remove ringtail denning or nesting habitat. The presence of a highly traveled roadway and occupied human structures in the proximity of the BSA are likely to preclude ringtails from denning in the project area.

Caltrans has determined the project would have "***no impact***" to ringtail.

Pacific Fisher–West Coast DPS

There are no potential den structures or day resting locations within the ESL where work would be conducted, and it is unlikely that fishers are present within the ESL. Additionally, the proximity to a heavily traveled roadway and human habitation likely deter Pacific Fisher from utilizing the ESL. No potential den trees would be removed during the critical denning period (March 1 through July 31).

Per CESA, Caltrans has determined the project would would have "no effect" onnot result in "***take***" of Pacific Fisher.

THREATENED AND ENDANGERED SPECIES

Marbled Murrelet

Suitable nesting habitat does not exist within the ESL or BSA. The two redwood trees greater than three feet DBH that would be removed for this project are not considered suitable nesting habitat for MAMU due to their relatively small size, as well as the placement of the narrow stand surrounded by traffic noise and agricultural fields. Removing these trees would not significantly affect the composition of the stand; therefore, there would be no negative impact to MAMU critical habitat.

Per FESA, Caltrans has determined the proposed project would have "***no effect***" on MAMU or MAMU critical habitat.

Per CESA, Caltrans has determined the proposed project would not result in "***take***" of MAMU.

Bald Eagle

As there would be no suitable nest trees removed for this project, the proposed work would have no impact on bald eagles or their habitat. Pre-construction nest surveys would be conducted to identify any new bald eagle nests near project activities and to provide opportunity to develop appropriate avoidance measures if present.

Per CESA, Caltrans has determined the proposed project would not result in "***take***" of bald eagles.

Northern Spotted Owl

Potential Northern spotted owl (NSO) habitat and NSO critical habitat are not present within the ESL or BSA. Caltrans has determined the project would not impact NSO.

Per FESA, Caltrans has determined the proposed project would have "***no effect***" on NSO or NSO critical habitat.

Per CESA, Caltrans has determined the proposed project would not result in "***take***" of NSO.

Bank Swallow

As there would be no nest removal associated with this project, the proposed work would have no impact on bank swallows or their habitat. Pre-construction nest surveys would be conducted to identify any new bank swallow nests near project activities and to provide opportunity to develop appropriate avoidance measures if present.

Per CESA, Caltrans has determined the proposed project would not result in "***take***" of bank swallow.

Coho Salmon – Southern Oregon/Northern California Coast ESU

Caltrans anticipates the project would be overall beneficial to the species because the removal of the culvert, installation of a bridge, and restoration of natural stream conditions would remove a fish passage barrier.

Ward Creek is the only waterway where in-stream work has been proposed. Construction would take place during the summer months when adult and juvenile salmonids are not expected to be present at this location due to their life history and migration patterns. Water levels would also be low as Ward Creek is seasonal. Coho salmon are not expected to be present due to lack of suitable spawning and rearing habitat within Ward Creek and current distribution dataHowever, several project activities could negatively affect coho salmon that may be present in Ward Creek when work is occurring. These include temporary impacts from stream diversion and associated fish relocation, noise and visual disturbance, and water quality impacts (Caltrans 2022d).

Per FESA, based on the existing culvert acting as a velocity barrier, stream conditions, life history and migration patterns (personal communication Mike Kelly NMFS 2022), Caltrans anticipates the project would have "***no effect"*** on coho salmon *(Oncorhynchus kisutch)*– Southern Oregon/Northern California Coast ESU (pop. 2). Caltrans anticipates the proposed project would have ***"no effect"*** on SONCC coho salmon designated critical habitat.

Per CESA, Caltrans has determined this project would not result in "***take***" of SONCC coho salmon.

Steelhead – Northern California DPS

Caltrans anticipates the project would be overall beneficial to the species because the removal of the culvert, installation of a bridge, and restoration of natural stream conditions would remove a fish passage barrier.

Ward Creek is the only waterway where in-stream work has been proposed. Construction would take place during the summer months when adult and juvenile steelhead are not expected to be present at this location due to their life history and migration patterns. Water levels would also be low as Ward Creek is seasonal. However, several project activities could negatively impact any steelhead that may be present in Ward Creek when work is occurring. These include clear water diversion and associated fish relocation, noise and visual disturbance, and water quality impacts (Caltrans 2022d).

To protect the most vulnerable life stages of sensitive species that occur within the project area, in-stream work would be restricted to the period between June 15 and October 15. Over the past decade the region has experienced several drought years. However, surveys conducted in 2022 with late spring rains show that Ward Creek does have reaches that sustain holding pools and it is possible that juvenile steelhead may be present during the construction work window.

Per FESA, Caltrans has determined the proposed project "***may affect, is likely to adversely affect***" steelhead (*Oncorhynchus mykiss irideus*)–Northern California DPS if they are present at Ward Creek during fish relocation efforts. The project would be overall beneficial to fish passage and habitat. Caltrans will continue to consult with NMFS about potential impacts to this species.

Chinook Salmon – California Coastal ESU

Caltrans anticipates the project would be overall beneficial to the species because the removal of the culvert, installation of a bridge, and restoration of natural stream conditions would remove a fish passage barrier.

Ward Creek is the only waterway where in-stream work has been proposed. Construction would take place during the summer months when adult and juvenile Chinook salmon are not expected to be present at this location due to their life history and migration patterns. Water levels would also be low as Ward Creek is seasonal. Chinook salmon are not expected to be present due to lack of suitable spawning and rearing habitat within Ward Creek and current distribution dataHowever, several project activities could negatively impact any Chinook salmon that may be present in Ward Creek when work is occurring. These include clear water diversion and associated fish relocation, noise and visual disturbance, and water quality impacts (Caltrans 2022d).

Per FESA, based on the existing culvert acting as a velocity barrier, stream conditions, life history and migration patterns (personal communication Mike Kelly NMFS 2022), Caltrans

anticipates has determined the project would have "***no effect***" on Chinook salmon (*Oncorhynchus tshawytscha)*–California Coastal ESU (pop. 17). Caltrans anticipates has determined the proposed project would have "***no effect***" on CC Chinook salmon designated critical habitat.

Pacific (Humboldt) Marten

Habitat within the ESL does not contain suitable denning sites or day resting sites for Pacific (Humboldt) marten. The proximity to a heavily traveled roadway and human habitation would also likely deter marten from utilizing the ESL. Additionally, this project is outside the current known population distribution.

Per FESA, Caltrans has determined the proposed project would have "***no effect***" on Pacific (Humboldt) marten.

Per CESA, Caltrans has determined the proposed project would not result in "***take***" of Pacific (Humboldt) marten.

Monarch Butterfly

There were no monarch observations recorded and no milkweed was found within the BSA. The ESL does not contain overwintering habitat. Due to the lack of suitable habitat or host plants, Caltrans has determined the project would not impact the monarch butterfly.

Per FESA, Caltrans determined this project would have "***no effect***" on monarch butterfly.

INVASIVE SPECIES

A list of the invasive species within the BSA can be found in Table 7. Standard Measures and Best Management Practices would be implemented as part of the proposed project to ensure invasive species do not proliferate. Caltrans has determined this project would have "***no impact***" to invasive species.

Discussion of CEQA Environmental Checklist Question 2.4b)— Biological Resources

b) Would the project 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?

Sensitive Natural Communities

Two coast redwood trees with a DBH greater than three feet would likely be removed to construct the new bridge at Ward Creek near PM 4.39. Additionally, several willows, an alder, a big leaf maple would be removed to facilitate removal of the old bridge over Ward Creek. For trees that must be removed, every effort would be made to reuse the cut trees of appropriate species and size for habitat restoration or other beneficial uses.

After the Draft Environmental Document was released, and while design was refined based on updated survey information to support the widened shoulder and other safety improvements, the number of small redwood trees planned for removal between approximately PM 4.15 and PM 4.35 increased from 21 to 52 (Caltrans 2023b). These trees are all under three feet DBH. The Project Development Team will continue to look for ways to refine and reduce these estimates throughout the Design phase of the project.

Removing these trees would not have a substantial effect on the overall quality, characteristics, or structure of the 9.3 acre Alliance because the relatively small trees that would be removed are immediately adjacent to a busy highway, are not part of high quality habitat, and the trees behind them would remain intact. Caltrans would continue to look for ways to maximize replanting opportunities during final design.

During the design refinement to support widened shoulder and other safety improvements, the number of black cottonwood trees estimated for removal increased from 3 to 22 between PMs 5.60 and 5.96. This would account for approximately 0.66 acre of impacts to the Alliance and its associated vegetation, which includes poison oak, stinging nettle, and berry brambles[4]. As impacts to this vegetation would account for approximately 22 percent of the total stand, the project would not have a substantial effect on the overall quality and structure of the Alliance. The Project Development Team will continue to look for ways to refine and reduce these estimates throughout the final Design phase of the project.

Riparian vegetation impacts are minimal and are discussed in the "Wetlands and Other Waters" section below. Mitigation would not be required.

Black cottonwood would be revegetated wherever feasible. Other replanting opportunities would be determined during final design. A Revegetation and Restoration Plan would be prepared to address sensitive vegetation replanting and creek restoration within the project area.

Caltrans has determined the project would have a "***less than significant impact***" to riparian habitat and sensitive natural communities.

Invasive Species

Please refer to Section 2.4. Biological Resources—Environmental Setting, Invasive Species. Additionally, please reference Section 1.4. Standard Measures and Best Management Practices Included in All Alternatives. Caltrans standard measures and Best Management Practices would be implemented as part of the proposed project to ensure invasive species do not proliferate.

Caltrans has determined the project would have "***no impact***" to invasive species.

[4] Although these species can be found in riparian areas, due to the absence of an ordinary high water mark for an applicable river, creek or stream system at this location, Caltrans has determined the vegetation at this location is not a riparian habitat.

Discussion of CEQA Environmental Checklist Question 2.4c)—Biological Resources

c) Would the project 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?

Wetlands and Other Waters

The Ward Creek channel would be excavated and graded approximately 50 feet upstream and 160 feet downstream of the new bridge. Temporary impacts were calculated based on current site access and proposed cut and fill areas. Permanent impacts to wetlands and non-wetland waters would occur where the new bridge would be built at Ward Creek. Permanent impacts to riparian habitat would occur where road widening is proposed and where the new bridge abutments and wingwalls would be placed. Table 8 summarizes impacts to Waters of the U.S. and State.

Table 8. Estimated Wetland Impacts

Jurisdictional Feature	Temporary Impacts (acre)	Permanent Impacts (acre)
Non-wetland waters	0.040	0.012
Wetlands	0.000	0.001
Riparian	0.652	0.075
Totals	**0.692**	**0.088**

To make way for the new bridge, old bridge removal, and road widening, Caltrans expects to remove several willows, an alder, a big leaf maple, and two large redwoods over three feet DBH near Ward Creek, and several more willows near the Wilson Creek system. Exact tree counts may be reduced further as designs are refined.

The trees proposed for removal contribute shade to the channel and are part of the Ward Creek and Wilson Creek systems, therefore are considered riparian vegetation. In the project, approximately 0.4 acre of riparian vegetation would be temporarily impacted and revegetated after construction. Approximately 0.075 acre of existing riparian vegetation would be permanently removed. All removed trees would be replanted onsite.

Due to the number of trees and amount of vegetation proposed for removal and the quantity of shade that would remain after construction, Caltrans has determined the quality of the riverine creek system, the wildlife corridors, and the essential fish habitat would not be adversely impacted.

Therefore, Caltrans has determined the project would have a "***less than significant impact with mitigation incorporated***" to wetlands and other waters.

Invasive Species

Please refer to Section 2.4. Biological Resources—Environmental Setting, Invasive Species. Additionally, please reference Section 1.4. Standard Measures and Best Management Practices Included in All Alternatives. Caltrans Standard Measures and Best Management Practices would be implemented as part of the proposed project to ensure invasive species do not proliferate.

Caltrans has determined this project would have "***no impact***" to invasive species.

Discussion of CEQA Environmental Checklist Question 2.4d)—Biological Resources

d) Would the project 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?

ANIMAL SPECIES

Caltrans has determined project activities would have "***no impact***" on special status species that were queried but did not have potential habitat within the ESL. However, as mentioned in the Environmental Setting, the following special status wildlife species could potentially occur in the project vicinity.

Western Pond Turtle

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Western pond turtle in Question a), it was determined the project would have "***no impact***" on Western pond turtle or their habitat.

Northern Red-legged Frog

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Northern red-legged frog in Question a), it was determined the project would have "***less than significant impact***" on Northern red-legged frog and their habitat.

Foothill Yellow-legged Frog

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Foothill yellow-legged frog in Question a), it was determined the project would have a "***less than significant impact***" on Foothill yellow-legged frog and their habitat.

Cooper's Hawk and Sharp-shinned Hawk

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Cooper's hawk and sharp-shinned hawk in Question a), it was determined the project would have "***no impact***" on Cooper's hawk and sharp-shinned hawk and and their habitat.

Grasshopper Sparrow

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of grasshopper sparrow in Question a), it was determined the project would have "***no impact***" on grasshopper sparrow and their habitat.

American Peregrine Falcon

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of grasshopper sparrow in Question a), it was determined the project would have "***no impact***" on American peregrine falcon and their habitat.

Osprey

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of osprey in Question a), it was determined the project would have "***no impact***" on osprey and their habitat.

Pacific Lamprey and Western Brook Lamprey

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Pacific lamprey and Western brook lamprey in Question a), it was determined the project would have "***no impact***" on Pacific lamprey and Western brook lamprey and their habitat.

Coastal Cutthroat Trout

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of coastal cutthroat trout in Question a), it was determined the project would have a "***less than significant impact***" on coastal cutthroat trout and their habitat.

Pallid Bat and Townsend's Big-eared Bat

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of bat species in Question a), it was determined the project would have *"**no impact***" on bat species and their habitat.

Sonoma Tree Vole

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Sonoma tree vole in Question a), it was determined the project would have "***no impact***" on Sonoma tree vole or their habitat.

Ringtail

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of ringtail in Question a), it was determined the project would have "***no impact***" on ringtail and their habitat.

Pacific Fisher–West Coast DPS

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Pacific fisher in Question a), it was determined the project would have "***no impact***" on Pacific fisher and their habitat.

THREATENED AND ENDANGERED SPECIES

Marbled Murrelet

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of marbled murrelet in Question a), it was determined the project would have "***no impact***" on marbled murrelet and their habitat.

Per FESA, Caltrans anticipates the proposed project would have "***no effect***" on MAMU and MAMU designated critical habitat.

Per CESA, given the project would not directly harm this species, this project would not result in "***take***" of marbled murrelet.

Bald Eagle

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of bald eagle in Question a), it was determined the project would have "***no impact***"on bald eagle and their habitat.

Per CESA, given the project would not directly harm this species, this project would not result in "***take***" of bald eagle.

Northern Spotted Owl

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Northern spotted owl in Question a), it was determined the project would have "***no impact***" on NSO and their habitat.

Per FESA, Caltrans anticipates the proposed project would have "***no effect***" on NSO and NSO designated critical habitat.

Per CESA, given the project would not directly harm this species, this project would not result in "***take***" of northern spotted owl.

Bank Swallow

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of bank swallow in Question a), it was determined the project would have "***no impact***" on bank swallows and their habitat.

Per CESA, given the project would not directly harm this species, this project would not result in "***take***" of bank swallows.

Salmonids: Coho Salmon–SONCC ESU, Steelhead–Northern California DPS, and Chinook Salmon–California Coastal ESU

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a) for discussion of impacts to salmonids and their habitat. These impacts have been examined to determine if the proposed project would interfere substantially with the movement of migratory salmonid species or with established migratory corridors.

Fish habitat within the ESL is restricted to the perennial and intermittent creeks that are direct tributaries to the Van Duzen River.

The project would not have permanent adverse impacts to fish passage or migration, and is not expected to impact fish passage or significantly reduce the amount of available rearing habitat within the system. The project would be wholly beneficial to fish species because it would remove an existing fish passage barrier. The bridge was also designed to minimize obstruction of flow and debris wracking. The project as a whole would result in a net increase of 600 square feet of stream habitat available to salmonids with the full span solution at Ward Creek. The instream design modifications at Ward Creek would allow for more natural movement of sediment, debris, and flood conveyance.

During construction, movement of salmonid species may be affected by noise (e.g., vibration from construction equipment, hoe-ramming) and visual stressors (e.g., artificial light, sudden movements). Dewatering portions of the streams (where construction would occur) and relocating aquatic species outside of the work area would reduce these effects. The diversion itself would temporarily restrict the movement of rearing juvenile salmonids, potentially making them more vulnerable to stress and predation, however the timing of diversion avoids the late fall-winter migration period for adult salmon that may pass through the project area to spawn, and most of the spring-early summer smolt out-migration.

Impacts to habitat, such as temporal loss of riparian vegetation, would not result in a measurable decrease in the quality of the rearing habitat or migration corridors for salmonid species. A Revegetation Plan would be implemented to restore the project area to pre-construction conditions with native tree and plant species. Additional Standard Measures and Best Management Practices described in Section 1.4 would avoid and minimize impacts to the movement and migration of salmonids.

Per FESA, Caltrans anticipates this project would have "***no effect***" on the SONCC coho salmon ESU and CC Chinook salmon ESU. Caltrans submitted a Biological Assessment and initiated formal consultation with NMFS under Section 7 of the Endangered Species Act on February 13, 2023. A Biological Opinion from NMFS was received on March 24, 2023, which stated the project "***is likely to adversely affect, is not likely to jeopordize***" NC steelhead. NMFS anticipates the project would result in incidental take of NC steelhead.

Per FESA, Caltrans anticipates this project would have "***no effect****"* on critical habitat for SONCC coho salmon and CC Chinook salmon.

Per CEQA, given the information above, Caltrans has determined the project would have a "***less than significant impact***" on movement of NC steelhead and established migratory corridors.

Per CESA, the project would not result in "***take***" of SONCC coho salmon.

Projects near salmonid-bearing waters can temporarily affect Essential Fish Habitat (EFH) for Pacific salmon (coho salmon and Chinook salmon) managed under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Unlike effects determinations for other species where a "may affect, and likely to adversely affect" determination can be made, for EFH only "no effect" and "may adversely effect" determinations can be made.

Because Caltrans does not anticipate impacts to Pacific salmonid habitat, Caltrans does not expect long-term, permanent impacts to EFH for Pacific salmon after construction that would reduce the quality of habitat to an extent that individual salmon would be impacted.

Caltrans anticipates a determination that the proposed project would have "***no effect***" to EFH for species managed under the Pacific Coast Salmon Fishery Management Plan.

Pacific (Humboldt) Marten

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of Pacific (Humboldt) marten in Question a), Caltrans has determined:

Per FESA, the project would have *"**no effect**"* on Pacific (Humboldt) marten and their habitat.

Per CESA, given the project would not directly harm this species, this project would have ***no*** "***take***" of Pacific (Humboldt) marten.

Monarch Butterfly

Please reference Section 2.4. Biological Resources—Discussion of CEQA Environmental Checklist, Question a). Based on the discussion of monarch butterfly in Question a), Caltrans has determined:

Per FESA, this project would have "***no effect***" on monarch butterfly.

Invasive Species

Please reference Section 2.4. Biological Resources—Environmental Setting, Invasive Species. Additionally, please reference Section 1.4. Standard Measures and Best Management Practices Included in All Alternatives. Caltrans standard measures and best management practices would be implemented as part of the proposed project to ensure invasive species do not proliferate.

Caltrans has determined this project would have "***no impact***" on invasive species.

Discussion of CEQA Environmental Checklist Question 2.4e)—Biological Resources

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The project would not conflict with any known local policies or ordinances protecting biological resources, including tree preservation policies. Caltrans practices incorporate Standard Measures and Best Management Practices to protect resources and to comply with ordinances; therefore, Caltrans has determined the project would have "***no impact.***"

Discussion of CEQA Environmental Checklist Question 2.4f)—Biological Resources

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other known approved local, regional, or state habitat conservation plans. The project's environmental impacts are expected to be minimal due to the scope of work and with implementation of the Standard Measures and Best Management Practices identified in Section 1.4; therefore, Caltrans has determined the project would have "***no impact***."

Mitigation Measures

The project is expected to permanently impact approximately 50 square feet (0.001 acre) of wetland near Ward Creek at approximately PM 4.37. The wetland would be affected by the location of the new bridge abutments and the bridge deck.

Mitigation for permanent wetland impacts would be implemented off-site. Mitigation credits for these impacts would be applied using the 2021 Steve Smith Fen Parcel Cooperative Agreement between Caltrans, the California Department of Fish and Wildlife, the North Coast Regional Water Quality Control Board, and the National Fish and Wildlife Foundation. The property identified (APN 210-033-006) is approximately 115 acres, has high value wetland features and watershed area and contains valuable upland mature forest habitat.

Riparian and sensitive natural community impacts would be offset by replanting on-site, or on an adjacent parcel, in cooperation with the landowners. To compensate for impacts to non-wetland waters that cannot be offset within the project footprint, Caltrans proposes to remove the old Ward Creek Bridge approximately 100 feet downstream of the current alignment and restore the bed, bank, and channel of Ward Creek (Figure 4). Removing the old Ward Creek Bridge would also daylight approximately 21 feet of Ward Creek and allow the creek to meander naturally.

Details pertaining to the proposed onsite restoration and offsite wetland mitigation can be found in the project's Final Mitigation Summary in Appendix F. A draft *Onsite Restoration Monitoring Plan*, detailing the restoration and monitoring components following construction activities, would be developed for submittal with project permits and finalized prior to construction.

Figure 4. Old Ward Creek Bridge, approximately 100 feet downstream of existing culvert and SR 36

2.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?				✓
Would the project: b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?				✓
Would the project: c) Disturb any human remains, including those interred outside of dedicated cemeteries?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Historic Property Survey Report* dated March 15, 2022 (Caltrans 2022e), and *Archaeological Survey Report* (Caltrans 2022f). Potential impacts to Cultural Resources are not anticipated because Caltrans Professionally Qualified Staff determined there are no archaeological or historical resources present. Additionally, Caltrans determined no historic properties would be affected by this project. Concurrence from the State Historic Preservation Officer was received on June 23, 2022. Cemeteries and burials were not identified within the project limits and no impacts to human remains are expected. Therefore, Caltrans has determined "***no impact***" would occur.

2.6 Energy

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?				✓
Would the project: b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Traffic, Noise, Air Quality, Energy and Greenhouse Gas Memo* dated May 11, 2021 (Caltrans 2021a) and the *Energy and Greenhouse Gas Memo Update* dated July 20, 2022 (Caltrans 2022c). Potential impacts to Energy are not anticipated because the project would not increase vehicle capacity when compared to the No-Build Alternative. On-site construction would primarily consume diesel and gasoline while operating heavy-duty construction equipment, material deliveries, and debris hauling (Table 9). The project location is not remote, and fuel would be easily obtained through local supply.

Table 9. Estimated Fuel Consumption During Project Construction

Construction Duration	Diesel Equipment Fuel Consumption (Gallons)	Gasoline Equipment Fuel Consumption (Gallons)
190 Days	44,251	12,384

In addition, the project would not obstruct a state or local plan for renewable energy. No new permanent sources of energy consumption would be built as a result of this project. An existing radar feedback sign would be replaced in a new location, which may provide an opportunity to incorporate solar panels to power the sign. Therefore, Caltrans has determined "***no impact***" would occur.

2.7 Geology and Soils

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
ii) Strong seismic ground shaking?				✓
iii) Seismic-related ground failure, including liquefaction?				✓
iv) Landslides?				✓
Would the project: b) Result in substantial soil erosion or the loss of topsoil?				✓
Would the project: c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓
Would the project: d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				✓
Would the project: e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓
Would the project: f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Preliminary Geotechnical Report* dated March 20, 2020 (Caltrans 2020a). Potential impacts to Geology and Soils are not anticipated because the project is not located on a known fault or in an area known for strong seismic shaking, ground failure, landslides, lateral spreading, liquefaction, collapse, or expansive soils. Geotechnical studies found that mixed compressible soils and subsidence may be present in the Ward Creek area. Therefore, abutments with deep foundations would be driven to improve stability over the lifespan of the bridge.

Additionally, a *Paleontology Identification Report* dated March 23, 2022, found there was a low potential for presence of paleontological resources in the project footprint (Caltrans 2022g). No unique paleontological or geologic features were identified. Therefore, Caltrans has determined "***no impact***" would occur.

2.8 Greenhouse Gas Emissions

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
Would the project: b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change (IPCC), established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. However, the research of the IPCC and other scientists attribute an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs, consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; and while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 and the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, primarily CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and severe fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce GHG emissions. In the context of climate change (as distinct from CEQA and NEPA), "*mitigation*" involves actions to reduce GHG emissions or to enhance the "sinks" that store them (such as forests and soils) to lessen adverse impacts. "*Adaptation*" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

FEDERAL

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the *Energy Policy and Conservation Act of 1975* (42 USC Section 6201), as amended by the *Energy Independence and Security Act (EISA) of 2007* and *Corporate Average Fuel Economy (CAFE) Standards*. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act (CAA). Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014).

U.S. EPA published a final rulemaking on December 30, 2021, that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. The updated GHG emissions standards will avoid more than 3 billion tons of GHG emissions through 2050. In April 2022, NHTSA announced corresponding new fuel economy standards for model years 2024 through 2026, which will reduce fuel use by more than 200 billion gallons through 2050 compared to the old standards and reduce fuel costs for drivers (U.S. EPA 2022a; NHTSA 2022).

STATE

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and Executive Orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals outlined in EO S-3-05, while further mandating that the California Air Resources Board (CARB) create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code [H&SC] Section 38551(b)). The law requires the CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

EO S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by year 2020. The CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill (SB) 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

SB 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under AB 32.

EO B-16-12 (March 2012): Orders State entities under the direction of the Governor, including the CARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015): Establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all State agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets.

It also directs the CARB to update the *Climate Change Scoping Plan* to express the 2030 target in terms of million metric tons of carbon dioxide equivalent ($MMTCO_2e$).[5] Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure its provisions are fully implemented.

SB 32, Chapter 249, 2016: Codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

SB 1386, Chapter 545, 2016: Declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the CARB to prepare a report that assesses progress made by each Metropolitan Planning Organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018): Sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

[5] GHGs differ in how much heat each traps in the atmosphere (called global warming potential or GWP). CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent" (CO_2e). The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.

AB 1279, Chapter 337, 2022, The California Climate Crisis Act: This bill mandates carbon neutrality by 2045 and establishes an emissions reduction target of 85% below 1990 level as part of that goal. This bill solidifies a goal included in EO B-55-18. It requires the CARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

Environmental Setting

The proposed project is in an agricultural and residential area, with a primarily natural-resources-based agricultural and light-industrial economy. SR 36 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is SR 299, 31 miles to the north. Traffic counts are low and SR 36 is rarely congested. The Humboldt County Association of Governments (HCAOG) guides transportation development. The Humboldt County General Plan Community Infrastructure and Services and Energy elements address GHGs in the project area. Construction on this project is expected to begin in 2024 and last for approximately 190 working days.

GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the CARB does so for the state, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

NATIONAL GHG INVENTORY

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total GHG emissions from all sectors in 2020 were 5,222 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. Of these, 79 percent were CO2, 11 percent were CH4, and 7 percent were N2O; the balance consisted of fluorinated gases. Total GHGs in 2020 decreased by 21% from 2005 levels and 11% from 2019. The change from 2019 resulted primarily from less demand in the transportation sector during the COVID-19 pandemic. The transportation sector was responsible for 27 percent of total U.S.

GHG emissions in 2020, more than any other sector (Figure ##), and for 36% of all CO2 emissions from fossil fuel combustion. Transportation CO2 emissions for 2020 decreased 13 percent from 2019 to 2020, but were 7 percent higher than transportation CO2 emissions in 1990 (Figure ##) (U.S. EPA 2022b)

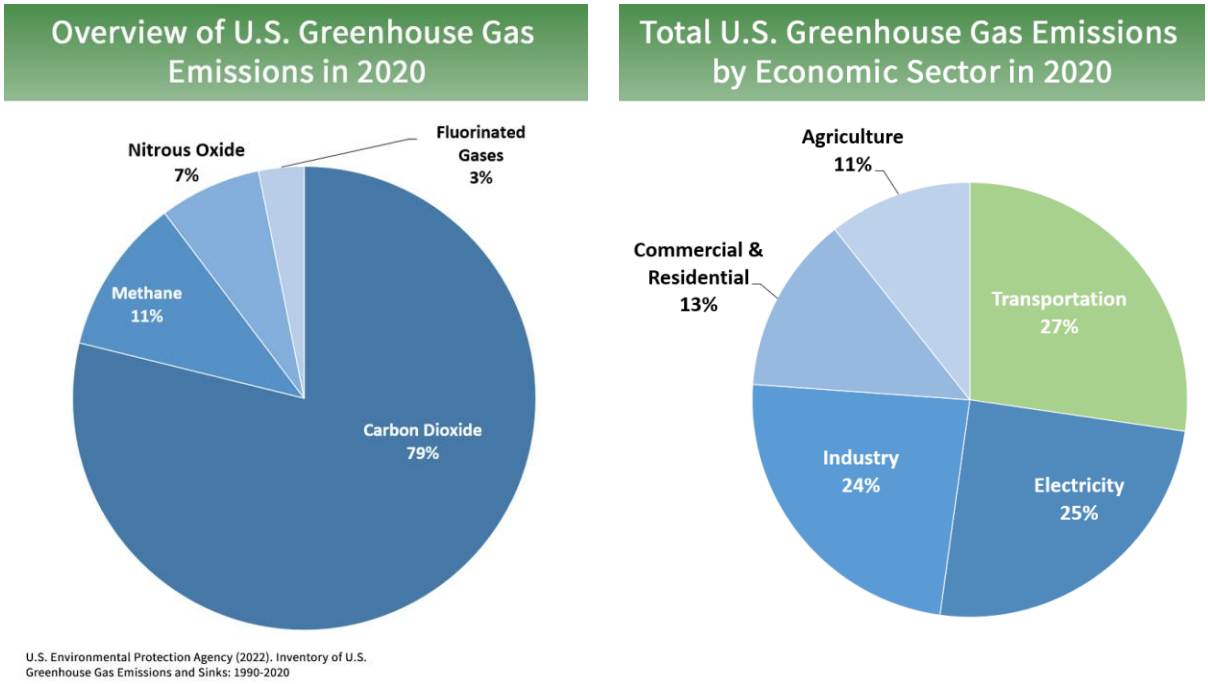

Figure 5. U.S. 2020 Greenhouse Gas Emissions

(Source: U.S. EPA 2022b)

STATE GHG INVENTORY

The CARB collects GHG emissions data for transportation, electricity, commercial and residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2022 edition of the GHG emissions inventory reported emissions trends from 2000 to 2020. Total California GHG emissions in 2020 were 369.2 $MMTCO_2e$, a reduction of 35.3 $MMTCO_2e$ from 2019 and 61.8 $MMTCO_2e$ below the 2020 statewide limit of 431 $MMTCO_2e$. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector,

during which vehicle miles traveled declined under stay-at-home orders and reductions in goods movement. Nevertheless, transportation remained the largest source of GHG emissions, accounting for 37 percent of statewide emissions (Figure 6). (Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for about 47 percent of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.) California's gross domestic product (GDP) and GHG intensity (GHG emissions per unit of GDP) both declined from 2019 to 2020 (Figure 7). It is expected that total GHG emissions will increase as the economy recovers over the next few years (CARB 2022a).

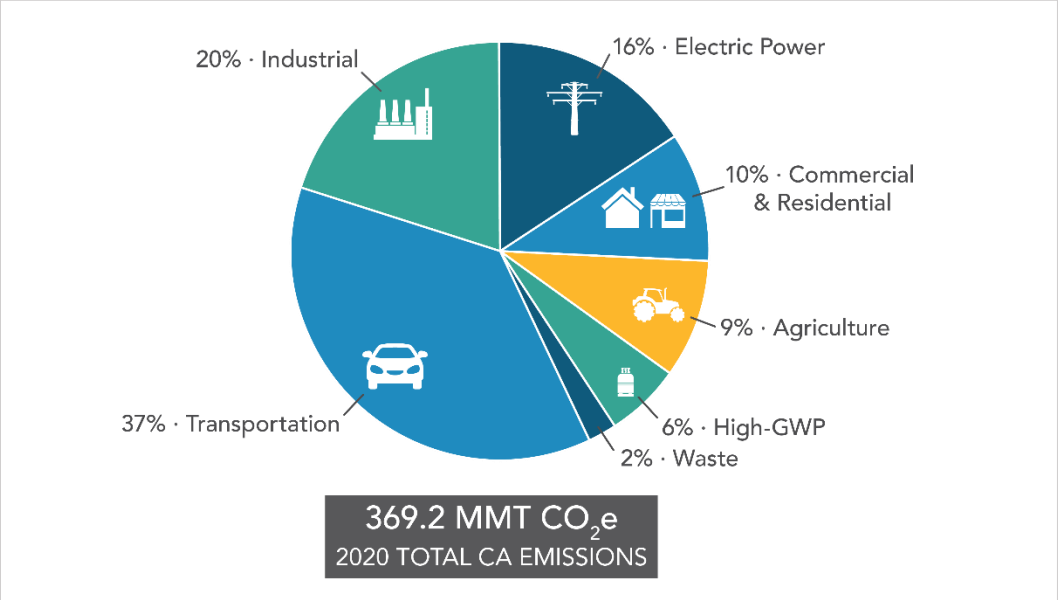

Figure 6. California 2020 Greenhouse Gas Emissions by Scoping Plan Category

(Source: CARB 2022a)

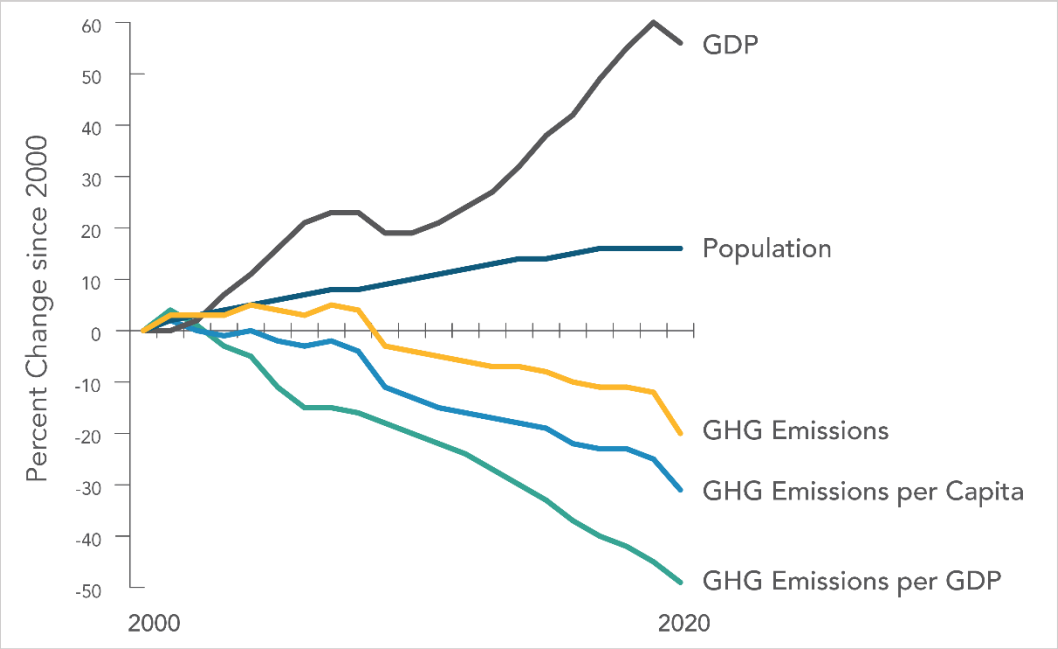

Figure 7. Change in California GDP, Population, and GHG Emissions since 2000

(Source: CARB 2022a)

AB 32 required the CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. The CARB adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The draft *2022 Scoping Plan Update* additionally lays out a path to achieving carbon neutrality by 2045 (CARB 2022b).

REGIONAL PLANS

The project area is not within the jurisdiction of a Metropolitan Planning Organization (MPO); therefore, the project is not subject to CARB GHG reduction targets. However, the Humboldt County Association of Governments is the Regional Transportation Planning Agency (RTPA) for the project area. The 2022-2042 Regional Transportation Plan (RTP) identifies a regional 40 percent reduction target for Humboldt County and the seven participating cities by 2030 (Table 10) (HCOAG 2022). Additionally, the county has pledged to make progress toward zero net greenhouse gas emissions by 2045.

The project would not conflict with a plan's policies or goals to reduce GHG. The project would support these goals by including project elements to provide safer multimodal networks (e.g., two 10-foot-wide shoulders and bicycle bridge rail over the Ward Creek bridge).

Table 10. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Humboldt County Association of Governments' 20-year Regional Transportation Plan: Variety in Rural Options of Mobility (VROOM) 2022-20242042	• Integrated multi-modal network • Invest in networks of safe and accessible bicycle and pedestrian infrastructure • Promote electric bicycles (e-bikes) • Achieve substantial mode shift to more walking, biking, and transit trips • Supporting shift to zero-emission fleet vehicles

Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation *v.* San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512). In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the proposed project is to reduce the frequency and severity of collisions and would not increase the vehicle capacity of the roadway. This type of project generally causes minimal or no increase in operational GHG emissions. Because the project would not increase the number of travel lanes on SR 36, no increase in vehicle miles traveled (VMT) would occur. While some GHG emissions during the construction period would be unavoidable, no increase in operational GHG emissions is expected. In addition, the widened shoulders would provide more space for non-motorized traffic, such as bicycles and pedestrians.

Construction Emissions

Construction GHG emissions would result from material processing and transportation, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

Use of long-life pavement, improved Transportation Management Plans, and changes in materials can also help offset emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction emissions were estimated using the 2021 Caltrans Construction Emissions Tool (CAL-CET2021) version 1.0. CAL-CET2021 produces fuel consumption estimates based on project-specific construction information. Estimates for this project are listed in Table 11 (Caltrans 2022c).

Table 11. Maximum Greenhouse Gas Emissions from Construction (U.S. tons)

Construction Year	CO_2	CH_4	N_2O	HFC	CO_2e*
2024	645	0.015	0.035	0.028	751

*A quantity of GHG is expressed as carbon dioxide equivalent (CO_2e) that can be estimated by the sum after multiplying each amount of CO_2, CH_4, N_2O, and HFC_{134a} by its global warming potential (GWP). Each GWP of CO_2, CH_4, N_2O, and HFC_{134a} is 1, 56, 280, and 3,400 respectively

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all CARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations (such as equipment idling restrictions) that reduce construction vehicle emissions also help reduce GHG emissions.

Additionally, this project has been identified as eligible for the Accelerated Bridge Construction (ABC) method. The ABC method would take fewer construction days, which would reduce passenger vehicle idling during one-way controlled construction, and use more precast elements to reduce additional falsework, forms, and bracing.

CEQA Conclusion

While the proposed project would result in GHG emissions during construction, it is anticipated the project would not result in any increase in operational GHG emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction GHG-reduction measures, the impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

STATEWIDE EFFORTS

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, low-carbon and cleaner future, while maintaining a robust economy (CARB 2022d).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research (OPR) identified five sustainability pillars in a 2015 report: (1) increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) reducing petroleum use by up to 50 percent by 2030; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (California Governor's OPR 2015). OPR later added strategies related to achieving statewide carbon neutrality by 2045 in accordance with EO B-55-18 and AB 1279 (OPR 2022).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks by 50% is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency (2022a) released *Natural and Working Lands Climate Smart Strategy*, with a focus on nature-based solutions.

CALTRANS ACTIVITIES

Caltrans continues to be involved on the Governor's Climate Action Team as the CARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15 (issued in April 2015) and SB 32 (2016) set an interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

Climate Action Plan for Transportation Investments

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation (which account for more than 40 percent of all polluting emissions) to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021b).

Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021c).

Caltrans Policy Directives And Other Initiates

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020b) provides a comprehensive overview of Caltrans' emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

Project-Level Greenhouse Gas Reduction Strategies

The following measures will also be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project:

- Expanded shoulders would provide more space for non-motorized modes of transportation on the roadway.
- After the old bridge is demolished, new native trees and riparian vegetation would be planted in its place.
- Replanted areas would be mulched to reduce irrigation needs.
- Swales would be included in feasible locations to treat stormwater runoff.
- There may be an opportunity to include solar panels to power a radar feedback sign planned for replacement within the project limits.
- The following measures listed in 1.4—Standard Measures and Best Management Practices Included in All Alternatives—would also reduce GHG emissions:
    - AR-2: Temporary access roads, construction easements, and staging areas that were previously vegetated would be restored to a natural contour and revegetated with regionally appropriate native vegetation.
    - TT-1: Pedestrian and bicycle access would be maintained during construction.
    - TT-3: A Transportation Management Plan (TMP) would be applied to the project.

Adaptation Strategies

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges, combined with a rising sea level, can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

FEDERAL EFFORTS

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways."

The *U.S. DOT Policy Statement on Climate Adaptation* in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. DOT 2011).

The U.S. DOT Climate Action Plan of August 2021 followed up with a statement of policy to "accelerate reductions in greenhouse gas emissions from the transportation sector and make our transportation infrastructure more climate change resilient now and in the future," following this set of guiding principles (U.S. DOT 2021):

- Use best-available science
- Prioritize the most vulnerable
- Preserve ecosystems
- Build community relationships
- Engage globally

U.S. DOT developed its climate action plan pursuant to the federal EO 14008, *Tackling the Climate Crisis at Home and Abroad* (January 27, 2021). EO 14008 recognized the threats of climate change to national security and ordered federal government agencies to prioritize actions on climate adaptation and resilience in their programs and investments (White House 2021).

FHWA Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

STATE EFFORTS

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or

sooner, the state is projected to experience a 2.7 to 8.8ºF increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77% increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67% of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the Coastal Zone. Major urban airports will be at risk of flooding from sea level rise, combined with storm surge, as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued EO S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 projections of sea level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018. This EO also gave rise to the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the *Draft California Climate Adaptation Strategy*, incorporating key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio*, and the CAPTI (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2022b).

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change, in addition to sea level rise, also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published *Planning and Investing for a*

Resilient California: A Guidebook for State Agencies in 2017, to encourage a uniform and systematic approach.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*, in 2018. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts (Climate Change Infrastructure Working Group 2018).

CALTRANS ADAPTATION EFFORTS

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide the analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Efforts

There are several small creeks, drainages, and streambeds within the project limits and the project would replace select culverts. New culverts would be designed to accommodate potential increases in flow from changing precipitation rates.

The new Ward Creek Bridge would have an expected design life of 50 years or more. The bridge would span the channel migration zone and the active channel width and would accommodate precipitation up to the level of a 100-year flood (1% chance annually).

The pavement type would be selected to withstand rising temperatures within the design life of the pavement (approximately 20 years).

The new guardrail would be a Midwest Guardrail System (MGS), with a design life of 20 years, which would incorporate steel guardrail posts (instead of treated wood) to reduce risk of failure if a wildfire occurred in the area.

Sea Level Rise

The proposed project is outside the Coastal Zone and not in an area subject to sea level rise (NOAA 2022). Elevation in the project area is between 115 and 280 feet above sea level, and approximately five miles from an area that would be minimally impacted by nine feet of sea level rise (Figure 8). Accordingly, direct impacts to transportation facilities due to projected sea level rise, storm surge, and cliff retreat are not expected.

Figure 8. Screencap of the project area in yellow oval from Sea Level Rise Viewer

(NOAA 2022)

Precipitation and Flooding

Most of the project is in the 500-year flood risk zone (0.02% chance annually). The eastern portion of the project is in the 100-year flood risk zone (1% chance annually). Weather data from the Scotia, California (048045) monitoring station indicates the project location has a Mean Annual Precipitation of 47.98 inches. Precipitation and flooding in the project area may increase with climate change. Within the life of the Ward Creek Bridge, the projected increase in 100-year storm depth is between 5.0 and 9.9% (Caltrans 2019). The project would upsize the 18-inch-diameter culvert at PM 5.90 to 24 inches, which would allow for future increased flow. In addition, the double barrel culvert at PM 5.29 would be replaced and redesigned to reduce flooding that occurs during periods of heavy precipitation.

Wildfire

The project location is in a State Responsibility Area (SRA) for wildfire (CAL FIRE 2007). The western part of the project is in a *Moderate* Fire Hazard Severity Zone and the eastern portion of the project is in a *High* Fire Hazard Severity Zone (Figure 9). The project would incorporate steel guardrail posts instead of wooden posts. The project would add a maintenance turnout in the eastern portion of the project at approximately PM 5.90, which would provide access for mowing and other vegetation control as needed. Additionally, the following standard measure would be incorporated:

- UE-3: The project is located within the *Moderate* to *High* CAL FIRE Threat Zone. The contractor would be required to submit a jobsite Fire Prevention Plan as required by Cal/OSHA before starting job site activities. In the event of an emergency or wildfire, the contractor would cooperate with fire prevention authorities (Section 1.4—Standard Measures and Best Management Practices Included in All Alternatives).

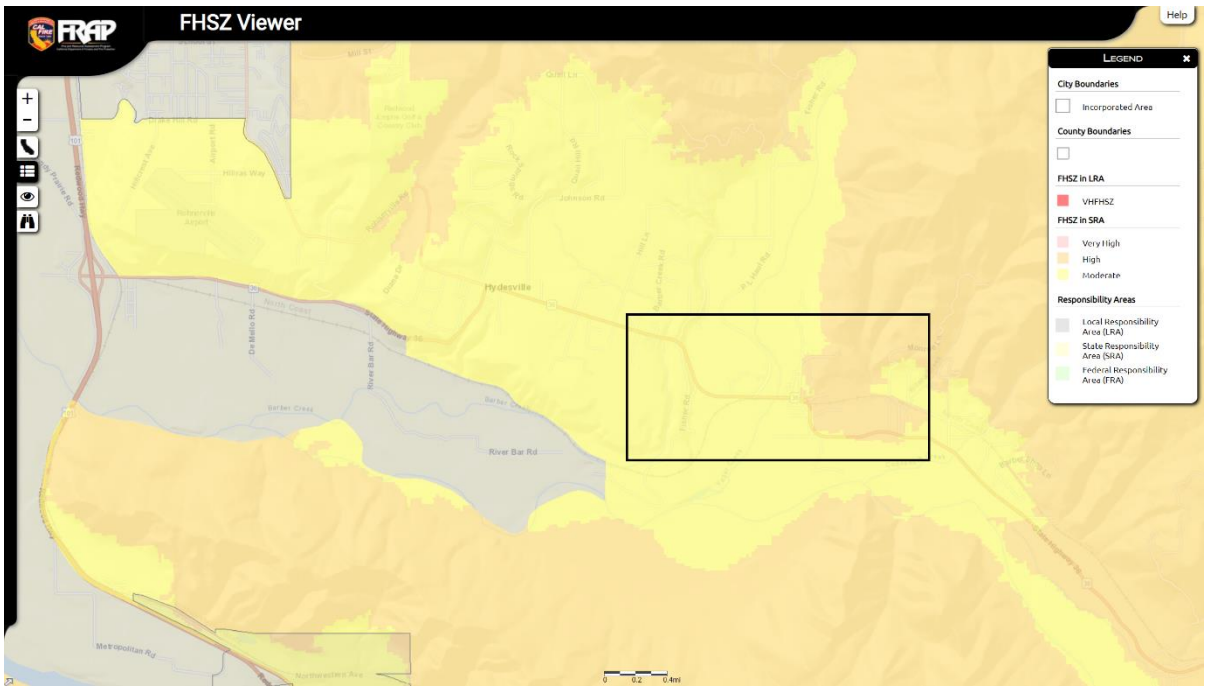

Figure 9. Screenshot of Fire Hazard Severity Zone Map in Vicinity of Project (CAL FIRE 2007)

Temperature

In the year 2055, the change in absolute minimum air temperature for Carlotta is expected to increase by 2.0 to 3.9ºF over current temperatures. The design life of pavement from this project would be about 20 years. The *District Climate Change Vulnerability Assessment* does not indicate temperature changes during the project's design life that would require adaptive changes in pavement design or maintenance practices (Caltrans 2019).

2.9 Hazards and Hazardous Materials

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
Would the project: 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?				✓
Would the project: c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
Would the project: 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?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				✓
Would the project: f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
Would the project: g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Initial Site Assessment Update* dated September 23, 2021 (Caltrans 2021d). Potential impacts to Hazardous Waste are not anticipated because the project is not expected to create hazards to the public or environment.

Asbestos-containing and lead-containing materials were detected inside and outside of the Caltrans right of way. Asbestos Containing Materials were found in the asphalt overlay of the old bridge over Ward Creek on private property. Demolition of the old bridge is expected to require a National Emission Standards for Hazardous Air Pollutants (NESHAP) notification and other standard containment measures (see Chapter 1.4). Westbound shoulder soils within the top one foot (or shallower) would be considered hazardous and would be handled using Caltrans standard measures for hazardous waste. The project site is not on the Hazardous Waste and Substances Site List (Cortese List).

The nearest school is approximately 0.45 mile away and would not be impacted by hazardous waste from the project. The nearest airport is approximately 2.2 miles away and noise from the airport and project would not expose people to excessive noise (ESA Associates 2021). The project would not impair emergency response or emergency evacuation because the road would not be fully closed for this project (Caltrans 2021e). One-way traffic control would provide accommodation for emergency vehicles. Additionally, the project is not in an area of "very high" wildfire risk (Section 2.8, Wildfire– Figure 9) and project activities would not expose people or structures to significant risk due to wildfire (California Department of Forestry and Fire Protection [CAL FIRE] 2007).

Therefore, Caltrans has determined "***no impact***" would occur.

2.10 Hydrology and Water Quality

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				✓
Would the project: b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				✓
Would the project: c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;			✓	
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			✓	

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or				✓
(iv) impede or redirect flood flows?			✓	
Would the project: d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				✓
Would the project: e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				✓

Regulatory Setting

The primary laws and regulations governing hydrology and water quality include:

- Federal: Clean Water Act (CWA)–33 USC 1344
- Federal: Executive Order for the Protection of Wetlands (EO 11990)
- State: California Fish and Game Code (CFGC) Sections 1600–1607
- State: Porter-Cologne Water Quality Control Act– Sections 13000 et seq.

Environmental Setting

Hydrology

This project is within the Van Duzen River Hydrologic Area, the Hydesville Hydrologic Sub-Area and intersects both the Lower Van Duzen River and Yager Creek watersheds. The Van Duzen River is a major tributary of the Eel River. The Eel River is within the southern portion of the Northern California Coastal Basin. The Eel River is the third largest river in California with a drainage area of 3,684 square miles (Caltrans 2022h). The four primary tributaries are the Van Duzen, South Fork Eel, North Fork Eel, and Middle Fork Eel rivers. The Eel River receives a significant amount of sediment due to natural hillslope erosion occurring on fragile, unconsolidated soils, and soft bedrock driven by large amounts of rainfall. Weather data from the Scotia, California (048045) monitoring station indicates the project location has a Mean Annual Precipitation of 47.98 inches.

Water Quality

The Van Duzen River was listed on the California CWA Section 303(d) list as impaired for sedimentation and siltation, and the U.S. Environmental Protection Agency (U.S. EPA) established the sediment and siltation total maximum daily load (TMDL) in 1999. A TMDL is a value that represents the maximum amount of pollutant that can enter a waterbody without violating a water quality standard. The overall goal of establishing a TMDL is to ensure that all "beneficial uses" are protected and water quality objectives are met. Water quality objectives and beneficial uses are identified for all the water bodies in the North Coast Region in the Water Quality Control Plan for the North Coast Region (Basin Plan) (NCRWQCB 2018).

Beneficial uses listed for the Van Duzen River Hydrologic Area include, but are not limited to:

- Drinking water supplies
- Industrial
- Recreational
- Commercial and sport fishing
- Cold water freshwater habitat
- Migration of aquatic organisms
- Spawning, reproduction, and early development

- Wildlife habitat
- Preservation of rare and endangered species

Discussion of CEQA Environmental Checklist Question 2.10 – Hydrology and Water Quality

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

This project would not violate any water quality standards or waste discharge requirements. The project would comply with the following standards:

- Clean Water Act (CWA) Sections 303, 401, 402, and 404
- Caltrans Statewide National Pollutant Discharge Elimination System (NPDES) Storm Water Permit (Caltrans NPDES Permit Order 2012-0011-DWQ) (State Water Resources Control Board [SWRCB] 2012)
- General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit (CGP)) Order 2009-0009-DWQ (as amended by Orders 2010-0014-DWQ and 2012-0006-DWQ) (SWRCB 2014)
- U.S. EPA NPDES General Permit for Discharges from Construction Activities (Construction General Permit (CGP)) (U.S. EPA 2017)

Therefore, Caltrans has determined "***no impact***" would occur.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

During construction, Ward Creek may require a clear water diversion. Temporary construction Best Management Practices (BMPs) would be implemented to avoid any potential impacts from dewatering groundwater supplies. Construction would take place during the summer and fall months when flow is reduced or no water is flowing; therefore, Caltrans has determined "***no impact***" would occur.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on- or off-site?

The project is not expected to result in substantial erosion; however, temporary minor increases in erosion and siltation are possible during the removal of the Ward Creek culvert and old bridge. Increasing the diameter of the culvert at PM 5.90 is anticipated to reduce water velocity and thus reduce erosion and sediment transport. Caltrans would use construction BMPs in order to reduce erosion, including devices that are designed to prevent sediment transport, such as fiber rolls or gravel bags. The post-construction restoration and revegetation of Ward Creek would prevent future erosion. In addition, Ward Creek may require a clear water diversion during construction. Due to the minor and temporary impacts that could occur from sediment, Caltrans has determined the project would have a "***less than significant impact***" on siltation and erosion.

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

This project would result in an increase in impervious surface which could increase the amount or rate of surface runoff. The total new impervious surface that this project would generate is anticipated to be 1.89 acres. To address the impacts of increased impervious surface, Caltrans would implement runoff management practices, including ensuring that adequate capacity of roadside ditches is maintained and the number of drainage systems is appropriate. Due to the implementation of runoff management strategies, Caltrans has determined this project would have a "***less than significant impact***" on the volume or frequency of flooding that results from changes in the rate or amount of surface runoff.

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Existing drainage patterns at each location would be preserved to avoid any adverse hydromodification. The project is not anticipated to create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems. In addition, the runoff that results from the increased impervious surface generated by this project would be treated. Treatment removes pollutants in a variety of ways such as filtering runoff water through vegetation and infiltration through the soil.

Given the project would not provide substantial additional sources of polluted runoff, Caltrans has determined "***no impact***" would occur.

(iv) impede or redirect flood flows?

During construction, a temporary diversion of Ward Creek may be necessary; however, the natural path of the creek would be restored post construction.

Additionally, a double barrel culvert at PM 5.29, replaced in a previous project, has been the site of localized flooding. The current project would slightly modify this culvert to better accommodate flood flows. If the scope of this culvert modification is too great for this project, it would be removed from this project and addressed separately.

Therefore, Caltrans has determined a "***less than significant impact***" would occur.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Since the project is not in flood hazard, tsunami, or seiche zones, Caltrans has determined "***no impact***" would occur.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project is not expected to result in long-term impacts to water quality. Potential temporary impacts related to construction activities would be minimized or avoided by following the requirements of the Caltrans NPDES, U.S. EPA, and the North Coast Regional Water Quality Control Boards. Further, this project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; therefore, Caltrans has determined "***no impact***" would occur.

Mitigation Measures

Based on the determinations made in the CEQA Environmental Checklist, no mitigation measures are proposed for this project.

2.11 Land Use and Planning

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Physically divide an established community?				✓
Would the project: b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Community Impact Assessment Memo for the HUM-36 Carlotta Shoulder Widening Project* dated August 23, 2022 (Caltrans 2022b). Potential impacts to Land Use and Planning are not anticipated because the project would not physically divide an established community. The project does not conflict with any land use plan, zoning plan, or other policies and regulations adopted for the purpose of mitigating an environmental impact. Therefore, Caltrans has determined "***no impact***" would occur.

2.12 Mineral Resources

Question:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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?				✓
Would the project: 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" determinations in this section are based on the scope, description, and location of the proposed project, as well as the Mines Online map (California Department of Conservation 2016). Potential impacts to Mineral Resources are not anticipated because gravel mining operations near the project would not be disturbed. The project would not result in a loss of availability of a known mineral resource or locally-important mineral resource recovery site. Therefore, Caltrans has determined "***no impact***" would occur.

2.13 Noise

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in: a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				✓
Would the project result in: b) Generation of excessive groundborne vibration or groundborne noise levels?				✓
Would the project result in: c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Traffic, Noise, Air Quality, Energy, and Greenhouse Gas Memo* dated May 11, 2021 (Caltrans 2021a). Potential impacts to noise are not anticipated because traffic volumes, composition, and speeds would remain the same after construction. A permanent increase in traffic noise is not expected to occur as a result of this project. Groundborne vibration would not occur during bridge construction because Caltrans expects to include driven piles instead of vibratory pile driving.

Construction would not exceed 86 dBA Lmax[6] beyond 50 feet from the job site between 9 PM and 6 AM. Additionally, established and estimated future noise contours from the Rohnerville Airport are more than two miles west of the edge of the project (HCAOG 2022). It is not expected the airport would expose people residing or working in the project area to excessive noise levels. Therefore, Caltrans has determined "***no impact***" would occur.

[6] dBA Lmax refers to highest sound level, in decibels, during a single noise event

2.14 Population and Housing

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: 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)?				✓
Would the project: b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to Population and Housing are not anticipated because the project would not build new housing, new businesses, or increase capacity of utilities or existing roads. People would not be displaced as a result of this project and housing would not be impacted. Therefore, Caltrans has determined "***no impact***" would occur.

2.15 Public Services

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?				✓
Police protection?				✓
Schools?				✓
Parks?				✓
Other public facilities?				✓

"No Impact" determinations in this section are based on the scope and description of the project. Potential impacts to Public Services are not anticipated because governmental facilities would not be built or altered during this project.

In addition, response times and service ratios would not be impacted by this project. The route would not be fully closed during construction and emergency vehicles would be accommodated through work areas as needed (Caltrans 2021e). Therefore, Caltrans has determined "***no impact***" would occur.

2.16 Recreation

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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?				✓
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project. Potential impacts to recreation are not anticipated because no parks or recreational facilities are within the project boundaries. Recreational facilities would not be constructed or expanded. Therefore, Caltrans has determined "***no impact***" would occur.

2.17 Transportation

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?				✓
Would the project: b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?				✓
Would the project: c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓
Would the project: d) Result in inadequate emergency access?				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Transportation Management Plan* dated August 12, 2021 (Caltrans 2021e). Potential impacts to transportation are not anticipated because the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system.

The project would achieve goals, set by Caltrans and community multimodal transportation policies, by widening shoulders and reducing risks of collisions. The project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) because the project would not increase vehicle miles traveled (VMT) or increase capacity of the highway.

The project would not increase hazards due to a geometric design feature or incompatible uses. The changes to road geometry would improve the existing curves and reduce risks. Since the project area is a highly agricultural area, the longer passing lane between PM 4.31 and PM 4.79 would provide safer opportunities for passenger and commercial vehicles to pass slower-moving vehicles, such as farm equipment. Additionally, eliminating the compound curve between PMs 5.60 and 5.96 would create a smoother and safer geometry for bulky vehicles.

A full highway closure is not anticipated for this project. One-way traffic control would provide access and accommodation for bicycles, pedestrians, and emergency vehicles through construction areas.

Therefore, Caltrans has determined "***no impact***" would occur.

2.18 Tribal Cultural Resources

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: a) 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 § 5020.1(k), or				✓
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				✓

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Historical Resources Evaluation Report* dated March 15, 2022 (Caltrans 2022e) and the *Archaeological Survey Report* dated February 23, 2022 (Caltrans 2022f). Potential impacts to Tribal Cultural Resources are not anticipated because local tribes were contacted and no concerns were raised. Additionally, a records search conducted by Caltrans Professionally Qualified Staff did not result in any documented Tribal Cultural Resources within the project footprint.

Therefore, Caltrans has determined "***no impact***" would occur.

2.19 Utilities and Service Systems

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities—the construction or relocation of which could cause significant environmental effects?				✓
Would the project: b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?				✓
Would the project: 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?				✓
Would the project: d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?				✓

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project: e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				✓

Utility facilities were identified within the project footprint during a potholing survey. They include Pacific Gas & Electric (PG&E) overhead electrical and underground gas lines, Optimum (previously Suddenlink) overhead and underground communications lines, AT&T overhead and underground communications lines, City of Fortuna underground sewer, and Hydesville County Water District underground water main.

The project would relocate, or place guardrail in front of, approximately seven telecommunications poles. Possible conflicts with underground communications lines and underground gas lines are still being evaluated. Utility conflict mapping would be completed during the Final Design phase of this project.

Caltrans would continue to partner with utility pole owners to determine new locations for their facilities. Sensitive environmental resources located within the project footprint would be avoided during relocation.

The project would not require potable water supply. The project would not construct new water lines or rely upon water supply.

The project would not increase wastewater treatment demand. New wastewater would not be generated by the project.

The project would not generate solid waste. No new waste-generating infrastructure would be constructed.

Therefore, Caltrans has determined "***no impact***" would occur.

2.20 Wildfire

Question	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near State Responsibility Areas (SRA) or lands classified as very high fire hazard severity zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				✓
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?				✓
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 may result in temporary or ongoing impacts to the environment?				✓
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?				✓

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Environmental Checklist" to include questions related to fire hazard impacts for projects located on lands classified as *very high* Fire Hazard Severity Zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these *very high* Fire Hazard Severity Zones.

"No Impact" determinations in this section are based on the scope, description, and location of the proposed project, as well as the *Fire Hazard Severity Map* (Chapter 2.8, Wildfire–Figure 9) (CAL FIRE 2007).

Potential impacts to Wildfire are not anticipated because the project would not impair emergency response or evacuation plans, exacerbate wildfire risks due to slope, prevailing winds, or other factors as a result of this project. Additionally, utility and infrastructure work would improve or replace existing facilities.

The project would not expose people or structures to significant risks downslope or downstream as a result of runoff. Drainage changes would improve conditions in the case of flooding by removing old infrastructure, upsizing existing culvert diameters, and replanting after construction. In the Ward Creek area, removing the old bridge would allow the creek to meander naturally and riparian areas would be replanted after the concrete abutments and the abandoned roadway were removed, which would improve bank stability.

Therefore, Caltrans has determined ***"no impact"*** would occur.

2.21 Mandatory Findings of Significance

Does the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?				✓
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means 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.)				✓
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓

Discussion of CEQA Environmental Checklist Question 2.21—Mandatory Findings of Significance

The California Environmental Quality Act of 1970 (CEQA) requires preparation of an Environmental Impact Report (EIR) when certain specific impacts may result from construction or implementation of a project. The analysis indicated the potential impacts associated with this project would not require an EIR. Mandatory Findings of Significance are not required for projects where an EIR has not been prepared.

2.22 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative impact assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time (CEQA § 15355).

Cumulative impacts to resources may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

Per Section 15130 of CEQA, a Cumulative Impact Analysis (CIA) discussion is only required in "…situations where the cumulative effects are found to be significant." Given this, a CIA was not required for this project.

Chapter 3. Agency and Public Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, interagency coordination meetings, meetings with landowners, and field visits with stakeholders. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

The following agencies, organizations, and individuals were consulted in the preparation of this environmental document.

Coordination with Tribes

Table 12. Coordination with Tribes

Date	Personnel - From	Personnel - To	Notes
May 7, 2021	Tina Fulton Caltrans Archaeologist	• Blue Lake Rancheria • Bear River Band of Rohnerville • Cher-Ae Heights Indian Community of the Trinidad Rancheria • Wiyot Tribe – Table Bluff Rancheria	Project notification letters were sent to the Chairperson for each tribe, and the Tribal Historic Preservation Officers (THPO) were cc'd.
July 19, 2021	Tina Fulton Caltrans Archaeologist	• Blue Lake Rancheria • Bear River Band of Rohnerville • Wiyot Tribe – Table Bluff Rancheria	Follow up email notifying contacts about proposed geotechnical borings and geoarchaeological trenching associated with the project - sent to the THPOs for Blue Lake, Bear River and Wiyot tribes.

Date	Personnel - From	Personnel - To	Notes
September 14, 2021	Janet Eidsness Blue Lake Rancheria THPO	Tina Fulton, Caltrans Archaeologist	Email response stating the project was outside the traditional area of concern for Blue Lake Rancheria.
November 2, 2021	Tina Fulton Caltrans Archaeologist	Melanie McIvor, Bear River Band of Rohnerville	New THPO notified of project. THPO responded same day; no concerns about project.

Coordination with Property Owners

Table 13. Coordination with Property Owners in the Project Area

Date	Personnel	Notes
June 11-22, 2021	Matthew Simmons, Caltrans Right of Way Property Owners	Caltrans Right of Way sent letters to property owners to request permission to enter to complete technical studies.
January 19, 2022	Zachary Larson, Caltrans Associate Environmental Planner Erik Bess, Property Owner	Caltrans staff spontaneously met with a property owner during a field visit.
April 26, 2022	Zachary Larson, Caltrans Risa Okuyama, Caltrans Cari Williams, Caltrans Jeremy Miller-Schulze, Caltrans Tai-Aqua Morgan-Marbet, Caltrans Jonathan Lee, Caltrans	Caltrans staff observed the southern portion of Ward Creek from Erik Bess' property.

Coordination with Resource Agencies

Table 14. Agency Coordination and Professional Contacts

Coordination Effort	Date	Personnel
Field Meeting with CDFW to discuss new bridge plan and project impacts.	October 15, 2021	Jen Olson, CDFW Kristine Pepper, CDFW Risa Okuyama, Caltrans Cari Williams, Caltrans Jeremy Miller-Schulze, Caltrans Dana Michels, Caltrans (Sea Grant)
Personal Communication: discussed using the Programmatic Letter of Concurrence (PLOC) for Northern spotted owl (NSO) and marbled murrelet (MAMU).	January 5, 2022	Greg Schmidt, USFWS Risa Okuyama, Caltrans
Personal Communication: discussed use of Programmatic Biological Opinion (PBO) for Section 7 consultation.	January 7, 2022	Mike Kelly, NMFS Risa Okuyama, Caltrans Cari Williams, Caltrans
CDFW Office Hours to discuss woody debris removal.	February 17, 2022	Jen Olson, CDFW Risa Okuyama, Caltrans Cari Williams, Caltrans
Level 1 Coordination Meeting.	April 6, 2022	Greg Schmidt, USFWS Mike Kelly, NMFS Jeff Jahn, NMFS Stephanie Frederickson, Caltrans Julie East, Caltrans Jeff Wright, Caltrans Cari Williams, Caltrans Risa Okuyama, Caltrans
Field Meeting with NMFS to discuss project impacts and fish habitat.	June 15, 2022	Mike Kelly, NMFS Cari Williams, Caltrans Risa Okuyama, Caltrans Zack Larson, Caltrans Susan Leroy, Caltrans Jason Frederickson, Caltrans Jeremy Miller-Schulze, Caltrans

Chapter 4. List of Preparers

The following individuals performed the environmental work and contributed to the preparation of the Initial Study / Mitigated Negative Declaration for this project:

California Department of Transportation, District 1

Alex Arevalo	NPDES Specialist
Marie Brady	Project Manager
Ellie Brauer	Water Quality Specialist, Water Quality Assessment and Environmental Document Preparation
Ruth Burris	Design, Project Report Preparation
Julie East	Branch Chief, Senior Environmental Scientist
Desiree Edgar	Acting Project Engineer, Design, Project Report Preparation
Noah Edwards	Design, Project Report Preparation
Christian Figueroa	Senior Engineering Geologist/Environmental Engineering Branch Chief, Hazardous Waste Coordinator, Paleontology Coordinator
Tina Fulton	Archaeologist/Co-PI Prehistoric Archaeology, Historic Property Survey Report and Archaeological Survey Report
Amanda Haas	Water Quality and Stormwater Specialist
Samantha Hadden	Stormwater Design
Valerie Jones	Landscape Associate, Visual Impact Assessment
Jonathan Lee	Revegetation Specialist
Cody Long	Project Engineer
Sonia Miller	Architectural Historian, Historic Property Survey Report

Jeremy Miller-Schulze	Hydraulics Design
Tai-Aqua Morgan-Marbet	Construction
Tim Nelson	Mitigation Specialist
Risa Okuyama	Project Biologist, Natural Environment Study
Ryan Pommerenck	Air Quality Engineer, Energy and Greenhouse Gas Update Memo
Brian Simon	Design Senior
Liza Walker	Acting Office Chief, Supervising Environmental Planner
Cari Williams	Environmental Coordinator, Environmental Document Preparation
Eric Wilson	Geotechnical Engineering
Saeid Zandian	Noise and Air Quality Specialist

Stantec – Paleontological Identification Report

MariaElena Conserva	Paleontological Resource Specialist, Earthview Science
Heather Waldrop	Senior Project Manager, Stantec

Pacific Legacy – Cultural Studies

Graham Dallendorf	Principal Geoarchaeologist, Pacific Legacy
Heidi Klingler	Principal Geoarchaeologist, Pacific Legacy

Chapter 5. Distribution List

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Greg Schmidt
United States Fish and Wildlife Service
1655 Heindon Road
Arcata, CA 95521

Susan Stewart
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Regional/County/Local Agencies

County Clerk's Office, Humboldt County
825 5th Street
Eureka, CA 95502

Humboldt County Association of Governments
611 I Street, Suite B
Eureka, CA 95501

Local Elected Officials

Michelle Bushnell, 2nd District County Supervisor
825 5th Street, Room 111
Eureka, CA 95501

Interested Groups, Organizations, and Individuals

Erik Bess
5798 Highway 36
Carlotta, CA 95528

Chapter 6. References

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_____. 2022g. Carlotta Shoulder Widening Project Paleontological Identification Report/Paleontological Evaluation Report. Prepared by MariaElena Conserva. Approved by Christian Figueroa, March 23, 2022.

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Gregory O'Connell, Senior Environmental Scientist (Specialist), Caltrans Liaison, California Department of Fish and Wildlife

Appendix A. Project Layouts

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

DESIGN STUDY ONLY

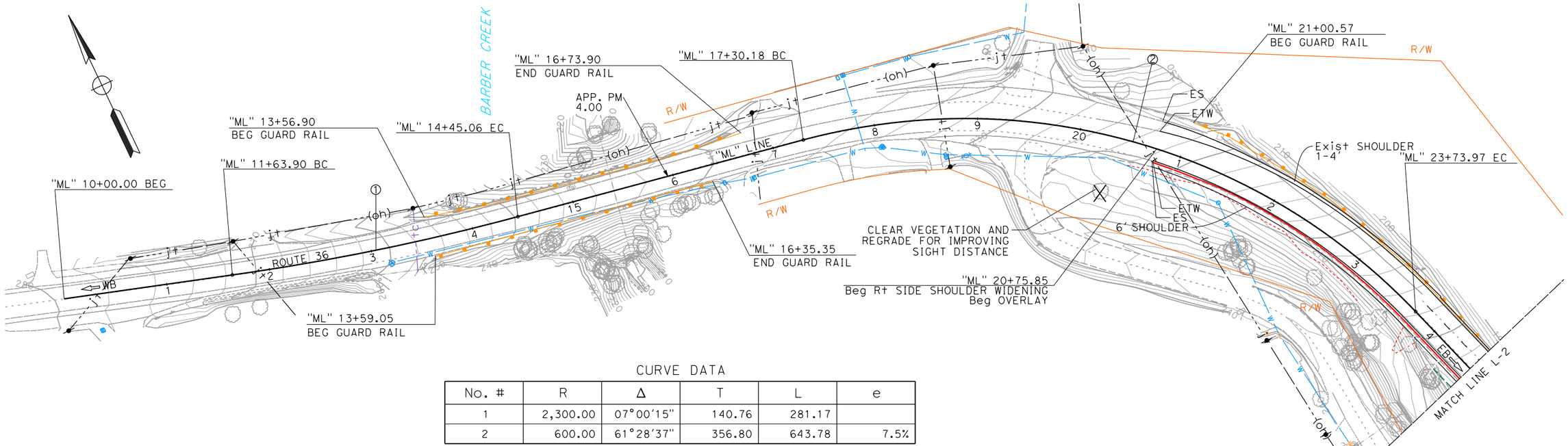
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CENTERLINE AND SHOULDER RUMBLE STRIPS WILL BE INSTALLED THROUGHOUT, EXCEPT AT INTERSECTIONS, UPON STRUCTURES AND WHERE TRAFFIC SAFETY ADVISES ABSENCE

LEGEND:

- GUARDRAIL
- CUT
- FILL
- SAWCUT LINE
- REMOVE TREES
- PROPOSED R/W
- PROPOSED TCE
- JOINT (ELECTRICAL AND TELECOMM) LINE
- ELECTRICAL LINE
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND



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SCALE 1" = 50'

LAYOUT
L-1

REVISED BY | DATE REVISED
KEVIN THURESSON | DESIREE EDGAR
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: BRIAN SIMON
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION 00-00-00
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UNIT 0311
PROJECT NUMBER & PHASE 01190001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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DESIGN STUDY ONLY

NOTE:

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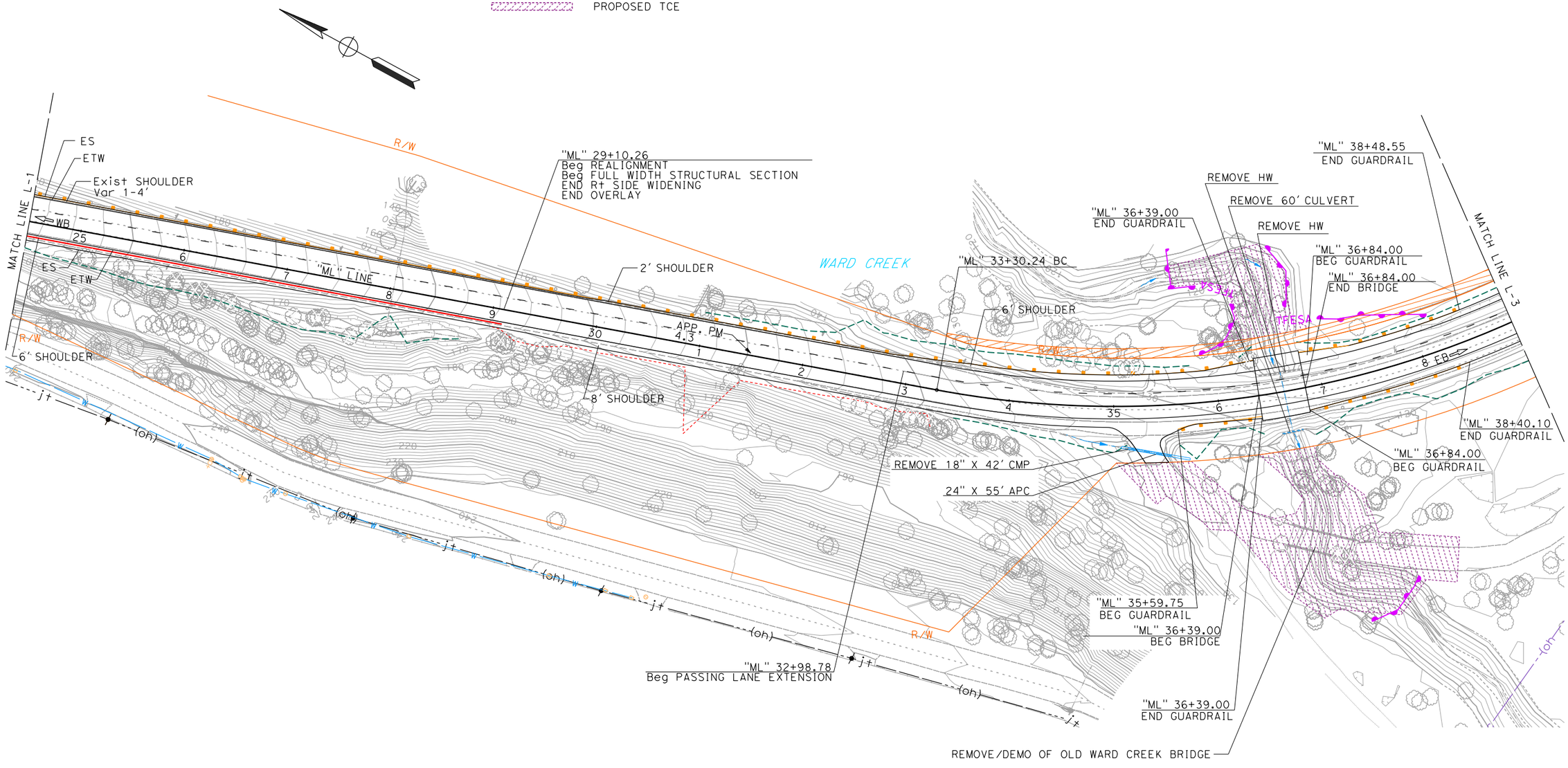
CENTERLINE AND SHOULDER RUMBLE STRIPS WILL BE INSTALLED THROUGHOUT, EXCEPT AT INTERSECTIONS, UPON STRUCTURES AND WHERE TRAFFIC SAFETY ADVISES ABSENCE

LEGEND:

- GUARDRAIL
- CUT
- FILL
- SAWCUT LINE
- REMOVE TREES
- PROPOSED R/W
- PROPOSED TCE
- JOINT (ELECTRICAL AND TELECOMM) LINE
- ELECTRICAL LINE
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND



SCALE 1" = 50'

LAYOUT L-2

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: KEVIN THURESSON
CHECKED BY: DESIREE EDGAR

FUNCTIONAL SUPERVISOR: BRIAN SIMON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

DESIGN STUDY ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

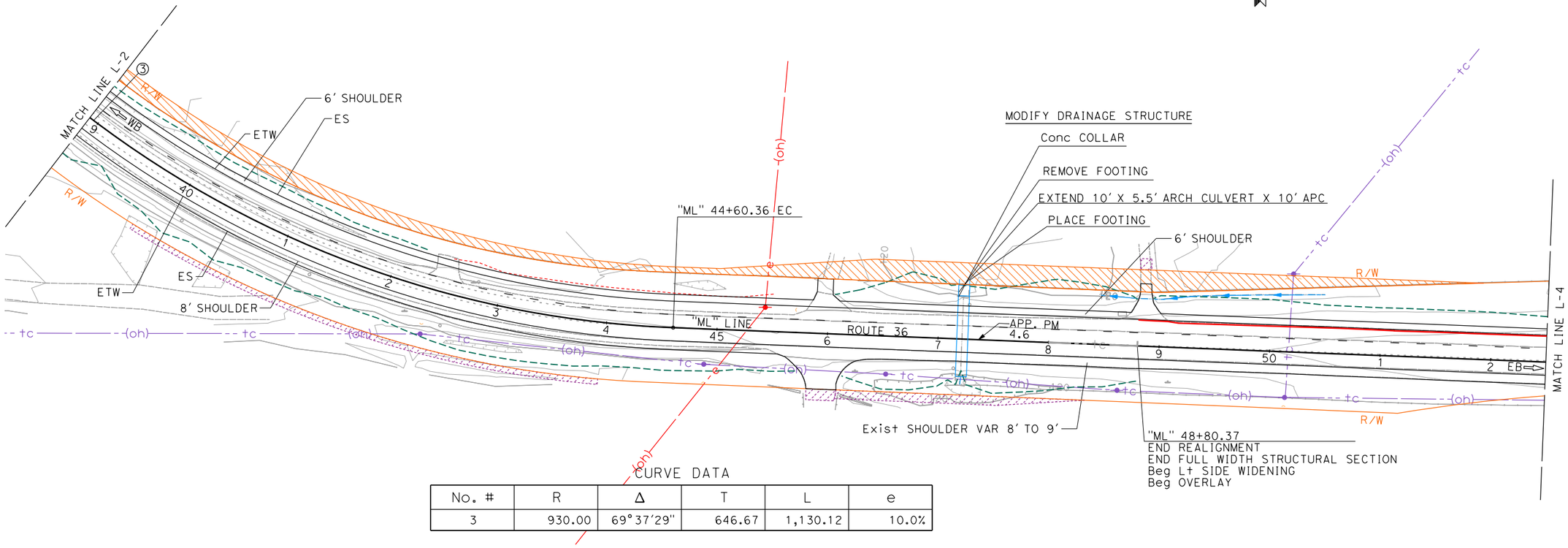
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

CENTERLINE AND SHOULDER RUMBLE STRIPS WILL BE INSTALLED THROUGHOUT, EXCEPT AT INTERSECTIONS, UPON STRUCTURES AND WHERE TRAFFIC SAFETY ADVISES ABSENCE

LEGEND:

- GUARDRAIL
- CUT
- FILL
- SAWCUT LINE
- REMOVE TREES
- PROPOSED R/W
- PROPOSED TCE
- JOINT (ELECTRICAL AND TELECOMM) LINE
- ELECTRICAL LINE
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND



CURVE DATA

No. #	R	Δ	T	L	e
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SCALE 1" = 50'

LAYOUT
L-3

REVISED BY | DATE REVISED

KEVIN THURESSON | DESIREE EDGAR

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: BRIAN SIMON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION 00-00-00 | DATE PLOTTED => 3/29/2023 | TIME PLOTTED => 9:12:43 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\0119000119ea003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0311 | PROJECT NUMBER & PHASE 01190001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

DESIGN STUDY ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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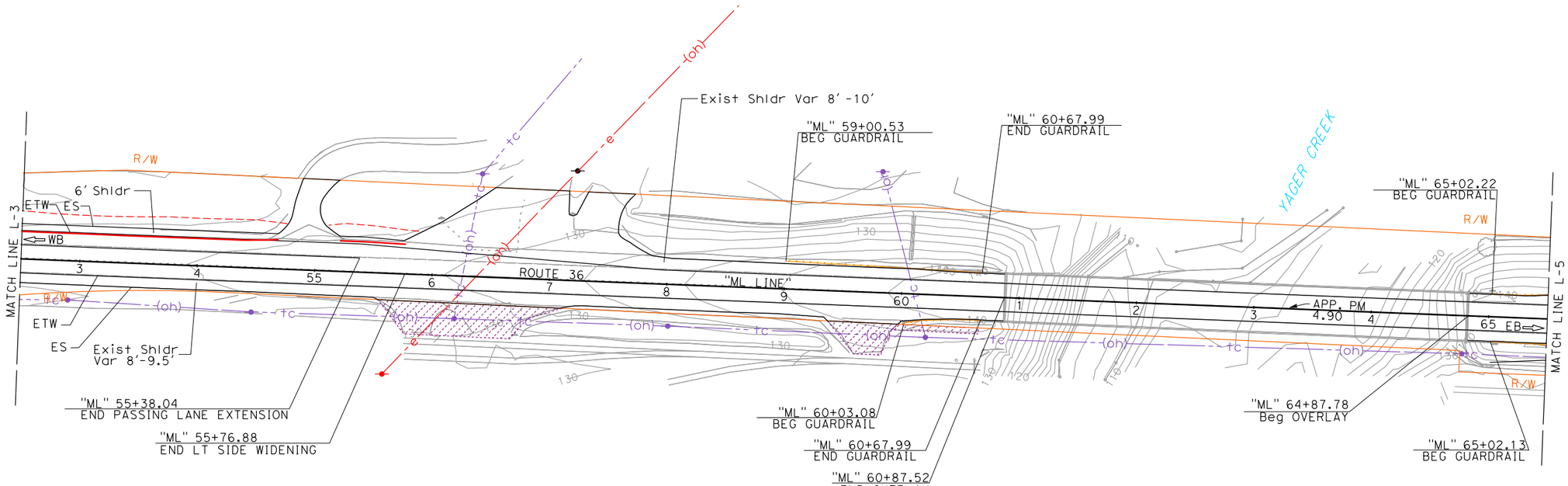
- GUARDRAIL
- CUT
- FILL
- SAWCUT LINE
- REMOVE TREES
- PROPOSED R/W
- PROPOSED TCE
- JOINT (ELECTRICAL AND TELECOMM) LINE
- ELECTRICAL LINE
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND



SCALE 1" = 50'

LAYOUT L-4

CALCULATED-DESIGNED BY	REVISED BY
CHECKED BY	DATE REVISED
KEVIN THURESSON	
CODY LONG	

FUNCTIONAL SUPERVISOR: BRIAN SIMON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 3/29/2023 | TIME PLOTTED => 9:12:49 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\0119000119ea004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0311 | PROJECT NUMBER & PHASE 01190001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

DESIGN STUDY ONLY

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LEGEND:

- GUARDRAIL
- CUT
- FILL
- SAWCUT LINE
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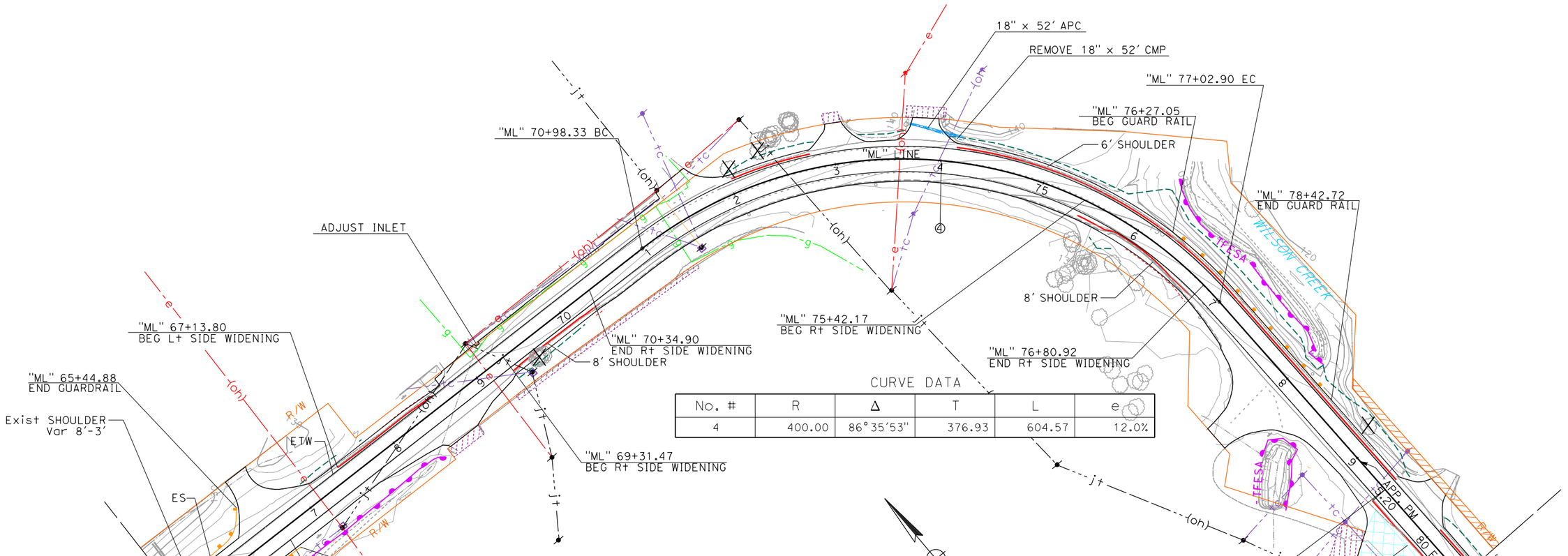
- PROPOSED R/W
- PROPOSED TCE
- JOINT (ELECTRICAL AND TELECOMM) LINE
- ELECTRICAL LINE
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND



CURVE DATA

No. #	R	Δ	T	L	e
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SCALE 1" = 50'

LAYOUT
L-5

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

FUNCTIONAL SUPERVISOR: BRIAN SIMON

CALCULATED-DESIGNED BY: KEVIN THURESSON
CHECKED BY: DESIREE EDGAR

REVISED BY | DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 3/29/2023
TIME PLOTTED => 9:12:55 AM

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => ...\0119000119ea005.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0311

PROJECT NUMBER & PHASE 01190001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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- PROPOSED TCE
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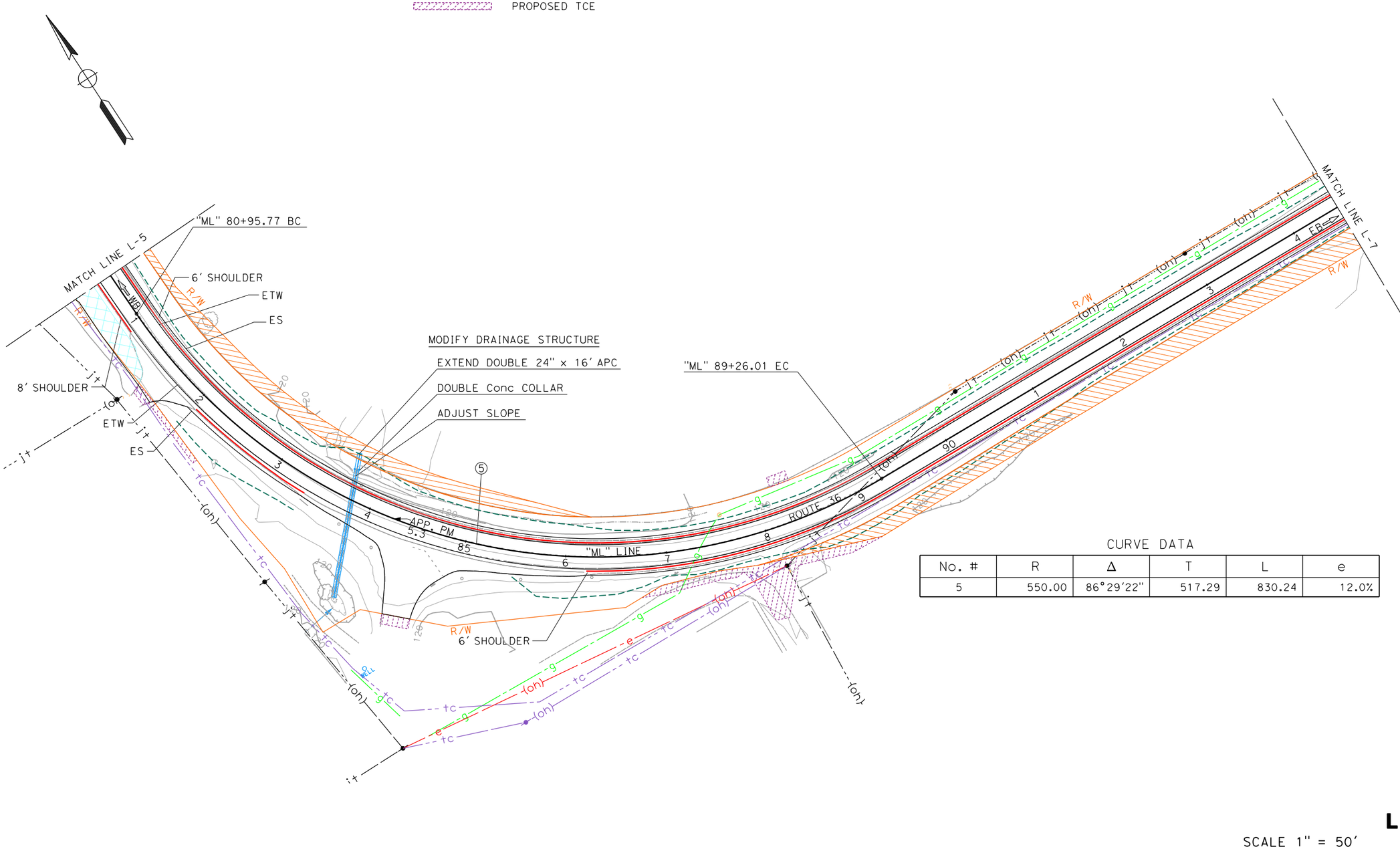
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND



CURVE DATA

No. #	R	Δ	T	L	e
5	550.00	86°29'22"	517.29	830.24	12.0%

SCALE 1" = 50'

LAYOUT L-6

CALCULATED-DESIGNED BY: KEVIN THURESSON
CHECKED BY: DESIREE EDGAR
REVISED BY / DATE REVISED:
FUNCTIONAL SUPERVISOR: BRIAN SIMON

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => 3/29/2023
TIME PLOTTED => 9:13:00 AM

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => ...\0119000119ea006.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0311

PROJECT NUMBER & PHASE 01190001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

DESIGN STUDY ONLY

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- PROPOSED TCE
- JOINT (ELECTRICAL AND TELECOMM) LINE
- ELECTRICAL LINE
- WATER LINE
- GAS LINE
- TELECOMM LINE
- TELECOMM UNDERGROUND

CURVE DATA

No. #	R	Δ	T	L	e
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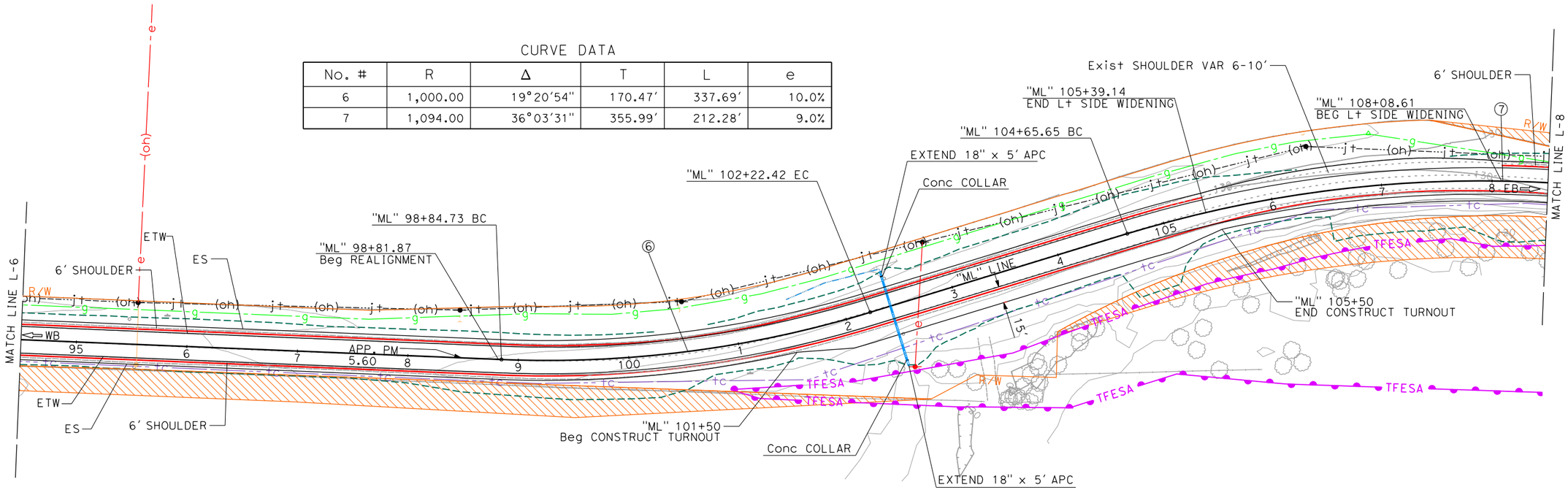
7	1,094.00	36°03′31"	355.99′	212.28′	9.0%



SCALE 1" = 50′

LAYOUT
L-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: BRIAN SIMON
CALCULATED-DESIGNED BY: KEVIN THURESSON
CHECKED BY: DESIREE EDGAR
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => 3/29/2023
TIME PLOTTED => 9:13:06 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\0119000119ea007.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0311 | PROJECT NUMBER & PHASE 01190001191

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	HUM	36	3.9/6.0		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

DESIGN STUDY ONLY

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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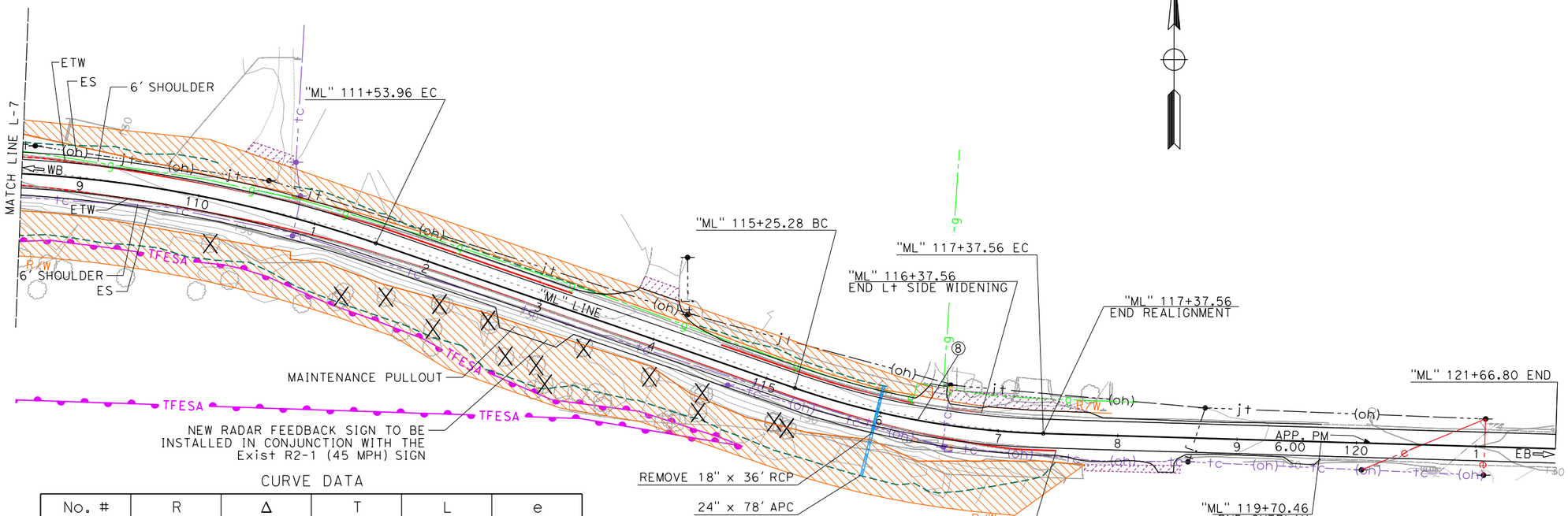

CURVE DATA

No. #	R	Δ	T	L	e
8	700.00'	17°22'31"	106.96'	212.28'	4.3%

SCALE 1" = 50'

LAYOUT L-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR: BRIAN SIMON

CALCULATED-DESIGNED BY: KEVIN THURESSON

CHECKED BY: DESIREE EDGAR

REVISED BY	DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 3/29/2023
TIME PLOTTED => 9:13:12 AM

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => ...\0119000119ea008.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0311

PROJECT NUMBER & PHASE 01190001191

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Appendix B. Title VI Policy Statement

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DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi .

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

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Appendix C. USFWS, NMFS, CNDDB, CNPS Species Lists

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
Phone: (707) 822-7201 Fax: (707) 822-8411

In Reply Refer To: April 13, 2023
Project Code: 2022-0062699
Project Name: 01-0J890 Carlotta Widening Shoulders Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arcata Fish And Wildlife Office
1655 Heindon Road
Arcata, CA 95521-4573
(707) 822-7201

PROJECT SUMMARY

Project Code: 2022-0062699
Project Name: 01-0J890 Carlotta Widening Shoulders Project
Project Type: Road/Hwy - Maintenance/Modification
Project Description: The California Department of Transportation (Caltrans) proposes a project on State Route 36 (SR 36), between post miles (PMs) 3.9 and 6.0 (Figure 1), near Carlotta in Humboldt County, California. The project proposes to extend the westbound passing and climbing lane from PM 4.31 to PM 4.19, add a 4-foot 10-inch soft median, widen shoulders to a minimum of 6 feet where widening would occur, and construct new shoulder and median sinusoidal rumble strips. Existing Metal Beam Guardrail (MBGR) will be replace with Midwest Guardrail System (MGS). New segments of MGS are proposed over Barber Creek, along with westbound passing lane extension, and adjacent to Wilson Creek. A new single-span bridge at Ward Creek (PM 4.39) will be constructed to accommodate shoulder widening and to provide fish passage restoration.

The proposed dimensions of the new Ward Creek Bridge would be 60 feet wide with a span of 45 feet. This bridge would accommodate three 12-foot lanes, two 10-foot shoulders, and include vehicular and bicycle bridge rail. The bridge deck is proposed to be a pre-cast/pre-stressed concrete slab with a depth of 1 foot 9 inches. Pile driving will be required to install the new pre-cast abutments. The passing lane would be 12 feet wide and 2,000 feet long.

Finally, the project will also include the removal of an old bridge at Ward Creek that was relinquished to a private property owner. The old bridge will be demolished and the creek area would be revegetated to reduce erosion. The proposed stream channel restoration at Ward Creek will extend an estimated 200 feet upstream and 200 feet downstream of the SR 36 stream crossing.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.540410800000004,-124.07292493438183,14z

Counties: Humboldt County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment *Martes caurina* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9081	Threatened

BIRDS

NAME	STATUS
Marbled Murrelet *Brachyramphus marmoratus* Population: U.S.A. (CA, OR, WA) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl *Strix occidentalis caurina* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Western Lily *Lilium occidentale* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/998	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge 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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats 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.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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
Allen's Hummingbird *Selasphorus sasin* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9637	Breeds Feb 1 to Jul 15
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 Sep 30

NAME	BREEDING SEASON
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
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Rufous Hummingbird *selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15
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

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.

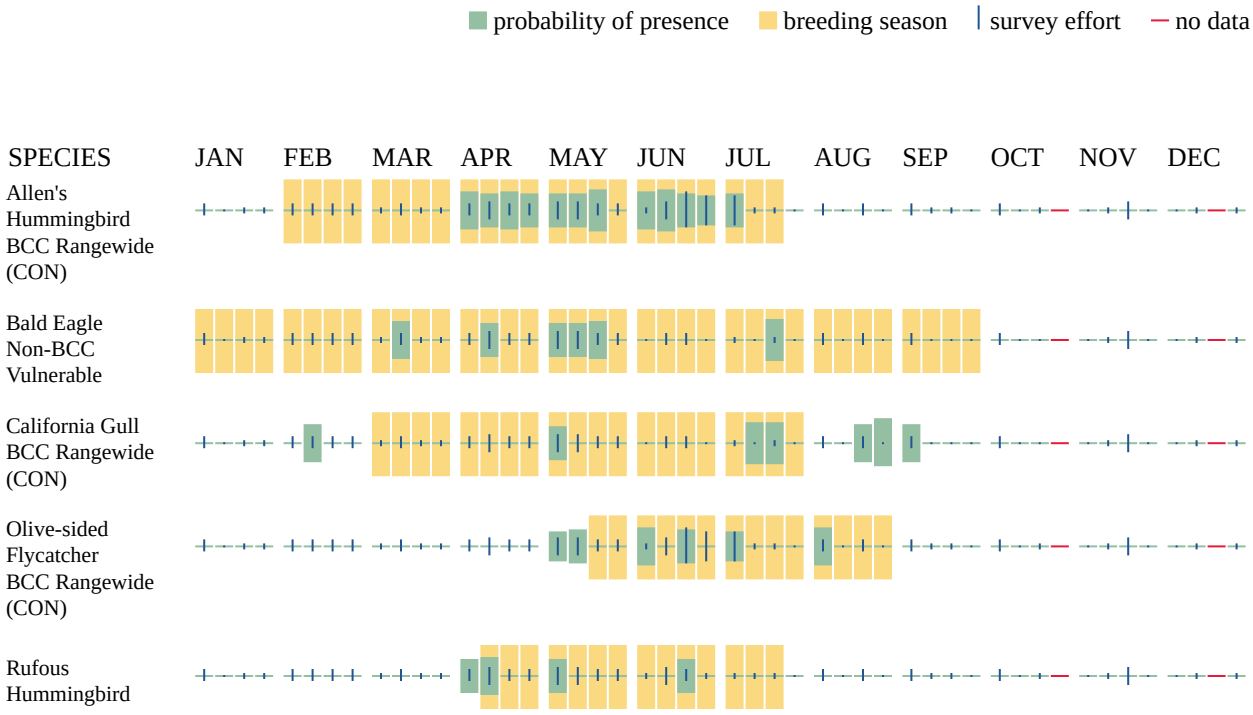
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

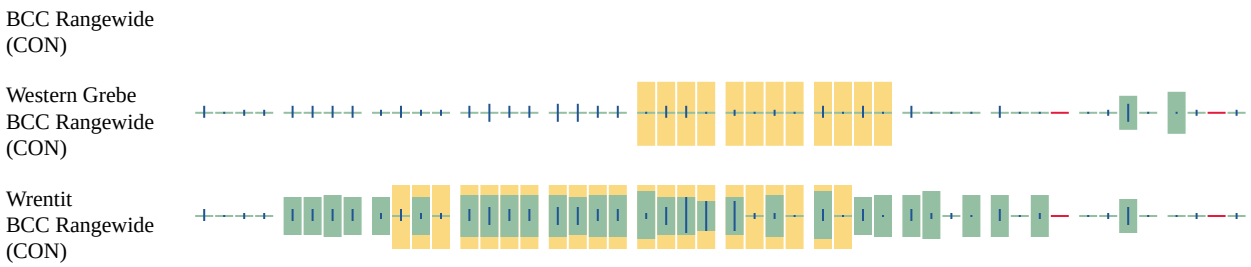
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
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.

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.





Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- 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

MIGRATORY BIRDS FAQ

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 Birds of Conservation Concern (BCC) 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 Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets 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 (Eagle Act 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 Rapid Avian Information Locator (RAIL) Tool.

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 Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

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 RAIL Tool 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:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "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 Eagle Act 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 Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

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 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.

WETLANDS

Impacts to NWI wetlands 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.S. Army Corps of Engineers District.

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.

FRESHWATER FORESTED/SHRUB WETLAND

- Palustrine

RIVERINE

- Riverine

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation
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City: Eureka
State: CA
Zip: 95501
Email risa.okuyama@dot.ca.gov
Phone: 7073826042

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Quad Name **Hydesville**
Quad Number **40124-E1**

ESA Anadromous Fish

SONCC Coho ESU (T) - **X**
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) - **X**
CVSR Chinook Salmon ESU (T) -
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) - **X**
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) -
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat - **X**
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat - **X**
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat - **X**
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat -
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

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 - X
Chinook Salmon EFH - X
Groundfish EFH - X
Coastal Pelagics EFH - X
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 -

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CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Quad IS (Hydesville (4012451) OR Fields Landing (4012462) OR McWhinney Creek (4012461) OR Iaqua Buttes (4012368) OR Owl Creek (4012358) OR Redcrest (4012348) OR Scotia (4012441) OR Taylor Peak (4012442) OR Fortuna (4012452))

Print Close

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Abronia umbellata var. breviflora	pink sand-verbena	Dicots	PDNYC010N4	61	3	None	None	G4G5T2	S2	1B.1	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal dunes
Accipiter cooperii	Cooper's hawk	Birds	ABNKC12040	118	6	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Cismontane woodland, Riparian forest, Riparian woodland, Upper montane coniferous forest
Accipiter striatus	sharp-shinned hawk	Birds	ABNKC12020	22	10	None	None	G5	S4	null	CDFW_WL-Watch List, IUCN_LC-Least Concern	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Riparian woodland
Acipenser medirostris pop. 1	green sturgeon - southern DPS	Fish	AFCAA01031	14	1	Threatened	None	G2T1	S1	null	AFS_VU-Vulnerable, IUCN_EN-Endangered	Aquatic, Estuary, Marine bay, Sacramento/San Joaquin flowing waters
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	955	1	None	Threatened	G1G2	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Ammodramus savannarum	grasshopper sparrow	Birds	ABPBXA0020	27	1	None	None	G5	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Valley & foothill grassland
Anodonta californiensis	California floater	Mollusks	IMBIV04220	6	1	None	None	G3Q	S2?	null	USFS_S-Sensitive	Aquatic
Antrozous pallidus	pallid bat	Mammals	AMACC10010	420	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Chaparral, Coastal scrub, Desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Riparian woodland, Sonoran desert scrub, Upper montane coniferous forest, Valley & foothill grassland
Aplodontia rufa humboldtiana	Humboldt mountain beaver	Mammals	AMAFA01017	28	6	None	None	G5TNR	SNR	null	null	Coastal scrub, Redwood, Riparian forest
Aquila chrysaetos	golden eagle	Birds	ABNKC22010	325	7	None	None	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, CDFW_WL-Watch	Broadleaved upland forest, Cismontane woodland, Coastal prairie, Great Basin

											List, IUCN_LC-Least Concern	grassland, Great Basin scrub, Lower montane coniferous forest, Pinon & juniper woodlands, Upper montane coniferous forest, Valley & foothill grassland
Arborimus pomo	Sonoma tree vole	Mammals	AMAFF23030	222	24	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	North coast coniferous forest, Oldgrowth, Redwood
Ardea alba	great egret	Birds	ABNGA04040	43	3	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Ardea herodias	great blue heron	Birds	ABNGA04010	156	7	None	None	G5	S4	null	CDF_S-Sensitive, IUCN_LC-Least Concern	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland
Ascaphus truei	Pacific tailed frog	Amphibians	AAABA01010	491	6	None	None	G4	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Aquatic, Klamath/North coast flowing waters, Lower montane coniferous forest, North coast coniferous forest, Redwood, Riparian forest
Bombus caliginosus	obscure bumble bee	Insects	IIHYM24380	181	6	None	None	G2G3	S1S2	null	IUCN_VU-Vulnerable	null
Bombus occidentalis	western bumble bee	Insects	IIHYM24252	306	5	None	Candidate Endangered	G3	S1	null	IUCN_VU-Vulnerable, USFS_S-Sensitive	null
Brachyramphus marmoratus	marbled murrelet	Birds	ABNNN06010	110	25	Threatened	Endangered	G3	S2	null	CDF_S-Sensitive, IUCN_EN-Endangered, NABCI_RWL-Red Watch List	Lower montane coniferous forest, Oldgrowth, Redwood
Cardamine angulata	seaside bittercress	Dicots	PDBRA0K010	38	1	None	None	G4G5	S3	2B.1	null	Lower montane coniferous forest, North coast coniferous forest, Wetland
Carex arcta	northern clustered sedge	Monocots	PMCYP030X0	13	3	None	None	G5	S1	2B.2	IUCN_LC-Least Concern	Bog & fen, North coast coniferous forest, Wetland
Carex leptalea	bristle-stalked sedge	Monocots	PMCYP037E0	8	1	None	None	G5	S1	2B.2	IUCN_LC-Least Concern	Bog & fen, Freshwater marsh, Marsh & swamp, Meadow & seep, Wetland
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	Dicots	PDSCR0D402	31	1	None	None	G4T2	S2	1B.2	BLM_S-Sensitive, SB_UCBG-UC Botanical Garden at Berkeley	Marsh & swamp, Salt marsh, Wetland
Castilleja litoralis	Oregon coast paintbrush	Dicots	PDSCR0D012	44	1	None	None	G3	S3	2B.2	null	Coastal bluff scrub, Coastal dunes, Coastal scrub
Charadrius montanus	mountain plover	Birds	ABNNB03100	90	1	None	None	G3	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Chenopod scrub, Valley & foothill grassland
Charadrius nivosus nivosus	western snowy plover	Birds	ABNNB03031	138	1	Threatened	None	G3T3	S3	null	CDFW_SSC-Species of Special Concern,	Great Basin standing waters,

											NABCI_RWL-Red Watch List	Sand shore, Wetland
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	Dicots	PDSCR0J0C3	80	2	None	None	G4?T2	S2	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Marsh & swamp, Salt marsh, Wetland
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	Dicots	PDONA05025	8	1	None	None	G5T1	S1	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_UCBG-UC Botanical Garden at Berkeley	Coastal bluff scrub, Coastal scrub
Coptis laciniata	Oregon goldthread	Dicots	PDRAN0A020	122	3	None	None	G4?	S3?	4.2	null	Meadow & seep, North coast coniferous forest, Wetland
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	AMACC08010	635	5	None	None	G4	S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland
Downingia willamettensis	Cascade downingia	Dicots	PDCAM060E0	8	4	None	None	G4	S2	2B.2	null	Cismontane woodland, Valley & foothill grassland, Vernal pool
Egretta thula	snowy egret	Birds	ABNGA06030	20	1	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp, Meadow & seep, Riparian forest, Riparian woodland, Wetland
Emys marmorata	western pond turtle	Reptiles	ARAAD02030	1424	16	None	None	G3G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_VU-Vulnerable, USFS_S-Sensitive	Aquatic, Artificial flowing waters, Klamath/North coast flowing waters, Klamath/North coast standing waters, Marsh & swamp, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, South coast flowing waters, South coast standing waters, Wetland
Entosphenus tridentatus	Pacific lamprey	Fish	AFBAA02100	9	3	None	None	G4	S3	null	AFS_VU-Vulnerable, BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters
Erethizon dorsatum	North American porcupine	Mammals	AMAFJ01010	523	10	None	None	G5	S3	null	IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Closed-cone

												coniferous forest, Lower montane coniferous forest, North coast coniferous forest, Upper montane coniferous forest
Erythronium oregonum	giant fawn lily	Monocots	PMLIL0U0C0	37	3	None	None	G5	S2	2B.2	SB_UCSC-UC Santa Cruz	Cismontane woodland, Meadow & seep, Ultramafic
Erythronium revolutum	coast fawn lily	Monocots	PMLIL0U0F0	172	29	None	None	G4G5	S3	2B.2	SB_UCSC-UC Santa Cruz	Bog & fen, Broadleaved upland forest, North coast coniferous forest, Wetland
Eucyclogobius newberryi	tidewater goby	Fish	AFCQN04010	127	2	Endangered	None	G3	S3	null	AFS_EN-Endangered, IUCN_NT-Near Threatened	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters
Falco peregrinus anatum	American peregrine falcon	Birds	ABNKD06071	73	7	Delisted	Delisted	G4T4	S3S4	null	CDF_S-Sensitive, CDFW_FP-Fully Protected	null
Fissidens pauperculus	minute pocket moss	Bryophytes	NBMUS2W0U0	22	1	None	None	G3?	S2	1B.2	USFS_S-Sensitive	North coast coniferous forest, Redwood
Gilia capitata ssp. pacifica	Pacific gilia	Dicots	PDPLM040B6	91	19	None	None	G5T3	S2	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Chaparral, Coastal bluff scrub, Coastal prairie, Valley & foothill grassland
Gilia millefoliata	dark-eyed gilia	Dicots	PDPLM04130	54	1	None	None	G2	S2	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal dunes
Gonidea angulata	western ridged mussel	Mollusks	IMBIV19010	157	1	None	None	G3	S2	null	IUCN_VU-Vulnerable	Aquatic
Haliaeetus leucocephalus	bald eagle	Birds	ABNKC10010	332	1	Delisted	Endangered	G5	S3	null	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Dicots	PDASTE5011	72	1	None	None	G4T3	S3	1B.2	BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Coastal bluff scrub, Coastal dunes, Coastal prairie
Lampetra richardsoni	western brook lamprey	Fish	AFBAA02180	4	3	None	None	G4G5	S3S4	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	null
Lasiurus cinereus	hoary bat	Mammals	AMACC05032	238	1	None	None	G3G4	S4	null	IUCN_LC-Least Concern	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North coast coniferous forest
Layia carnosa	beach layia	Dicots	PDAST5N010	25	1	Threatened	Endangered	G2	S2	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_SBBG-Santa Barbara Botanic Garden	Coastal dunes, Coastal scrub
Lilium occidentale	western lily	Monocots	PMLIL1A0G0	16	5	Endangered	Endangered	G1G2	S1	1B.1	SB_BerrySB-Berry Seed Bank	Bog & fen, Coastal bluff scrub, Coastal prairie, Coastal scrub, Freshwater

												marsh, Marsh & swamp, North coast coniferous forest, Wetland
Lycopodium clavatum	running-pine	Ferns	PPLYC01080	120	34	None	None	G5	S3	4.1	null	Lower montane coniferous forest, Marsh & swamp, North coast coniferous forest, Wetland
Margaritifera falcata	western pearlshell	Mollusks	IMBIV27020	78	1	None	None	G4G5	S1S2	null	IUCN_NT-Near Threatened	Aquatic
Martes caurina humboldtensis	Humboldt marten	Mammals	AMAJF01012	44	2	Threatened	Endangered	G4G5T1	S1	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Redwood
Mitellastra caulescens	leafy-stemmed mitrewort	Dicots	PDSAX0N020	21	1	None	None	G5	S4	4.2	null	Broadleaved upland forest, Lower montane coniferous forest, Meadow & seep, North coast coniferous forest
Montia howellii	Howell's montia	Dicots	PDPOR05070	123	51	None	None	G3G4	S2	2B.2	null	Meadow & seep, North coast coniferous forest, Vernal pool, Wetland
Myotis volans	long-legged myotis	Mammals	AMACC01110	117	1	None	None	G4G5	S3	null	IUCN_LC-Least Concern	Upper montane coniferous forest
Myotis yumanensis	Yuma myotis	Mammals	AMACC01020	265	2	None	None	G5	S4	null	BLM_S-Sensitive, IUCN_LC-Least Concern	Lower montane coniferous forest, Riparian forest, Riparian woodland, Upper montane coniferous forest
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Dicots	PDPLM0C0E1	64	1	None	None	G4T2	S2	1B.1	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
Noccaea fendleri ssp. californica	Kneeland Prairie pennycress	Dicots	PDBRA2P041	1	1	Endangered	None	G5?T1	S1	1B.1	SB_UCSC-UC Santa Cruz	Broadleaved upland forest, Coastal prairie, Ultramafic
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	Marsh	CTT52110CA	53	1	None	None	G3	S3.2	null	null	Marsh & swamp, Wetland
Nycticorax nycticorax	black-crowned night heron	Birds	ABNGA11010	37	3	None	None	G5	S4	null	IUCN_LC-Least Concern	Marsh & swamp, Riparian forest, Riparian woodland, Wetland
Oncorhynchus clarkii clarkii	coast cutthroat trout	Fish	AFCHA0208A	45	5	None	None	G5T4	S3	null	AFS_VU-Vulnerable, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Fish	AFCHA02032	10	3	Threatened	Threatened	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	Fish	AFCHA0213P	10	4	Threatened	Endangered	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Estuary, Klamath/North coast flowing waters
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	Fish	AFCHA0213Q	32	8	Threatened	None	G5T3Q	S3	null	AFS_TH-Threatened	Aquatic, Estuary, Klamath/North coast flowing waters

Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Fish	AFCHA0205S	1	1	Threatened	None	G5T2Q	S2	null	AFS_TH-Threatened	Aquatic, Sacramento/San Joaquin flowing waters
Packera bolanderi var. bolanderi	seacoast ragwort	Dicots	PDAST8H0H1	72	36	None	None	G4T4	S2S3	2B.2	null	Coastal scrub, North coast coniferous forest
Pandion haliaetus	osprey	Birds	ABNKC01010	504	65	None	None	G5	S4	null	CDF_S-Sensitive, CDFW_WL-Watch List, IUCN_LC-Least Concern	Riparian forest
Pekania pennanti	Fisher	Mammals	AMAJF01020	555	2	None	None	G5	S2S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	North coast coniferous forest, Oldgrowth, Riparian forest
Piperia candida	white-flowered rein orchid	Monocots	PMORC1X050	222	7	None	None	G3?	S3	1B.2	SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden	Broadleaved upland forest, Lower montane coniferous forest, North coast coniferous forest, Ultramafic
Platismatia lacunosa	crinkled rag lichen	Lichens	NLLEC2Q010	4	1	None	None	G4	S1	2B.3	null	North coast coniferous forest, Riparian woodland
Plethodon elongatus	Del Norte salamander	Amphibians	AAAAD12050	151	1	None	None	G4	S3	null	CDFW_WL-Watch List, IUCN_NT-Near Threatened	Oldgrowth
Polemonium carneum	Oregon polemonium	Dicots	PDPLM0E050	16	1	None	None	G3G4	S2	2B.2	null	Coastal prairie, Coastal scrub, Lower montane coniferous forest
Rana aurora	northern red-legged frog	Amphibians	AAABH01021	292	31	None	None	G4	S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Klamath/North coast flowing waters, Riparian forest, Riparian woodland
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	Amphibians	AAABH01051	1606	49	None	None	G3T4	S4	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Aquatic, Klamath/North coast flowing waters, Riparian forest, Riparian scrub, Riparian woodland
Rhyacotriton variegatus	southern torrent salamander	Amphibians	AAAAJ01020	416	16	None	None	G3?	S2S3	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFS_S-Sensitive	Lower montane coniferous forest, Oldgrowth, Redwood, Riparian forest
Riparia riparia	bank swallow	Birds	ABPAU08010	299	4	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern	Riparian scrub, Riparian woodland
Sidalcea malachroides	maple-leaved checkerbloom	Dicots	PDMAL110E0	136	60	None	None	G3	S3	4.2	null	Broadleaved upland forest, Coastal prairie, Coastal scrub, North coast coniferous forest, Riparian forest
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Dicots	PDMAL110F9	60	14	None	None	G5T2	S2	1B.2	SB_UCSC-UC Santa Cruz	Coastal bluff scrub, Coastal prairie, North coast coniferous forest
Sidalcea oregana ssp. eximia	coast checkerbloom	Dicots	PDMAL110K9	19	4	None	None	G5T1	S1	1B.2	null	Lower montane coniferous forest, Meadow & seep, North coast coniferous forest, Wetland
Spergularia canadensis var. occidentalis	western sand-spurrey	Dicots	PDCAR0W032	4	1	None	None	G5T4	S1	2B.1	null	Marsh & swamp, Wetland
Spirinchus thaleichthys	longfin smelt	Fish	AFCHB03010	46	4	Candidate	Threatened	G5	S1	null	IUCN_LC-Least Concern	Aquatic, Estuary
Thaleichthys pacificus	eulachon	Fish	AFCHB04010	10	1	Threatened	None	G5	S1	null	IUCN_LC-Least Concern	Aquatic, Klamath/North

												coast flowing waters
Upland Douglas Fir Forest	Upland Douglas Fir Forest	Forest	CTT82420CA	15	1	None	None	G4	S3.1	null	null	North coast coniferous forest
Usnea longissima	Methuselah's beard lichen	Lichens	NLLEC5P420	206	107	None	None	G4	S4	4.2	BLM_S-Sensitive	Broadleaved upland forest, North coast coniferous forest, Oldgrowth, Redwood

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CNPS Rare Plant Inventory

California Native Plant Society

Search Results

53 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**4012451:4012462:4012461:4012368:4012358:4012348:4012441:4012442:4012452**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK
Abronia umbellata var. *breviflora*	pink sand-verbena	Nyctaginaceae	annual herb	Jun-Oct	None	None	G4G5T2	S2	1B.1
Angelica lucida	sea-watch	Apiaceae	perennial herb	Apr-Sep	None	None	G5	S3	4.2
Astragalus rattanii var. *rattanii*	Rattan's milk-vetch	Fabaceae	perennial herb	Apr-Jul	None	None	G4T4	S4	4.3
Cardamine angulata	seaside bittercress	Brassicaceae	perennial herb	(Jan)Mar-Jul	None	None	G4G5	S3	2B.2
Carex arcta	northern clustered sedge	Cyperaceae	perennial herb	Jun-Sep	None	None	G5	S1	2B.2
Carex leptalea	bristle-stalked sedge	Cyperaceae	perennial rhizomatous herb	Mar-Jul	None	None	G5	S1	2B.2
Carex lyngbyei	Lyngbye's sedge	Cyperaceae	perennial rhizomatous herb	Apr-Aug	None	None	G5	S3	2B.2
Castilleja ambigua var. *ambigua*	johnny-nip	Orobanchaceae	annual herb (hemiparasitic)	Mar-Aug	None	None	G4T4	S3S4	4.2
Castilleja ambigua var. *humboldtiensis*	Humboldt Bay owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	Apr-Aug	None	None	G4T2	S2	1B.2
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun	None	None	G3	S3	2B.2
Chloropyron maritimum ssp. *palustre*	Point Reyes salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	None	None	G4?T2	S2	1B.2
Chrysosplenium glechomifolium	Pacific golden saxifrage	Saxifragaceae	perennial herb	Feb-Jun	None	None	G5?	S3	4.3
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	Onagraceae	annual herb	Jun-Aug	None	None	G5T1	S1	1B.1
Collomia tracyi	Tracy's collomia	Polemoniaceae	annual herb	Jun-Jul	None	None	G4	S4	4.3
Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	(Feb)Mar-May(Sep-Nov)	None	None	G4?	S3?	4.2
Downingia willamettensis	Cascade downingia	Campanulaceae	annual herb	Jun-Jul(Sep)	None	None	G4	S2	2B.2
Epilobium septentrionale	Humboldt County fuchsia	Onagraceae	perennial herb	Jul-Sep	None	None	G4	S4	4.3
Erythronium oregonum	giant fawn lily	Liliaceae	perennial herb	Mar-Jun(Jul)	None	None	G5	S2	2B.2

Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4G5	S3	2B.2
Fissidens pauperculus	minute pocket moss	Fissidentaceae	moss		None	None	G3?	S2	1B.2
Fritillaria purdyi	Purdy's fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G4	S4	4.3
Gilia capitata ssp. *pacifica*	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	G5T3	S2	1B.2
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2
Glehnia littoralis ssp. *leiocarpa*	American glehnia	Apiaceae	perennial herb	May-Aug	None	None	G5T5	S2S3	4.2
Hemizonia congesta ssp. *tracyi*	Tracy's tarplant	Asteraceae	annual herb	(Mar-Apr)May-Oct	None	None	G5T4	S4	4.3
Hesperevax sparsiflora var. *brevifolia*	short-leaved evax	Asteraceae	annual herb	Mar-Jun	None	None	G4T3	S3	1B.2
Hosackia gracilis	harlequin lotus	Fabaceae	perennial rhizomatous herb	Mar-Jul	None	None	G3G4	S3	4.2
Lathyrus glandulosus	sticky pea	Fabaceae	perennial rhizomatous herb	Apr-Jun	None	None	G3	S3	4.3
Layia carnosa	beach layia	Asteraceae	annual herb	Mar-Jul	FT	CE	G2	S2	1B.1
Lilium kelloggii	Kellogg's lily	Liliaceae	perennial bulbiferous herb	(Feb)May-Aug	None	None	G3	S3	4.3
Lilium occidentale	western lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	FE	CE	G1G2	S1	1B.1
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	(Mar)Apr-Aug(Sep)	None	None	G3	S3	4.2
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	Feb-Jul	None	None	G5	S4	4.2
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	Jun-Aug(Sep)	None	None	G5	S3	4.1
Lycopus uniflorus	northern bugleweed	Lamiaceae	perennial herb	Jul-Sep	None	None	G5	S4	4.3
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	(Mar)Apr-Oct	None	None	G5	S4	4.2
Montia howellii	Howell's montia	Montiaceae	annual herb	(Feb)Mar-May	None	None	G3G4	S2	2B.2
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G4T2	S2	1B.1
Noccaea fendleri ssp. *californica*	Kneeland Prairie pennycress	Brassicaceae	perennial herb	May-Jun	FE	None	G5?T1	S1	1B.1
Packera bolanderi var. *bolanderi*	seacoast ragwort	Asteraceae	perennial rhizomatous herb	(Jan-Apr)May-Jul(Aug)	None	None	G4T4	S2S3	2B.2
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar-Apr)May-Sep	None	None	G3?	S3	1B.2
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	(Mar-Apr)May-Aug	None	None	G4G5	S4	4.2

Platismatia lacunosa	crinkled rag lichen	Parmeliaceae	foliose lichen (epiphytic)		None	None	G4	S1	2B.3
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	(Feb-Mar)Apr-Aug	None	None	G4	S4	4.2
Polemonium carneum	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	None	None	G3G4	S2	2B.2
Ribes laxiflorum	trailing black currant	Grossulariaceae	perennial deciduous shrub	Mar-Jul(Aug)	None	None	G5?	S3	4.3
Ribes roezlii var. *amictum*	hoary gooseberry	Grossulariaceae	perennial deciduous shrub	Mar-Apr	None	None	G5T4	S4	4.3
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	perennial herb	(Mar)Apr-Aug	None	None	G3	S3	4.2
Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Mar)May-Aug	None	None	G5T2	S2	1B.2
Sidalcea oregana ssp. *eximia*	coast checkerbloom	Malvaceae	perennial herb	Jun-Aug	None	None	G5T1	S1	1B.2
Spergularia canadensis var. *occidentalis*	western sand-spurrey	Caryophyllaceae	annual herb	Jun-Aug	None	None	G5T4	S1	2B.1
Tiarella trifoliata var. *trifoliata*	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	(May)Jun-Aug	None	None	G5T5	S2S3	3.2
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	fruticose lichen (epiphytic)		None	None	G4	S4	4.2

Showing 1 to 53 of 53 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 13 April 2023].

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Appendix D. SHPO Concurrence Letter

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State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Armando Quintero, *Director*

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

June 23, 2022

VIA EMAIL

In reply refer to: FHWA_2022_0317_001

David Price, Section 106 Coordinator
Cultural Studies Office
Division of Environmental Analysis
1120 N Street, PO Box 942873, MS-27
Sacramento, CA 94273-0001

Subject: Finding of Effect for the Proposed Carlotta Shoulder Widening Project, Humboldt County, California

Dear Mr. Price:

Caltrans is continuing consultation regarding the above project in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (106 PA). As part of your documentation, Caltrans submitted a Finding of No Adverse Effect (FNAE) for the proposed project.

Caltrans District 1 proposes the Undertaking to upgrade a 2.1 mile section of State Route 36 in Humboldt County. The project will extend the existing westbound passing lane, widening shoulders to a minimum of six feet where applicable, add a 4-foot-10-inch-wide soft median, and construct a new eastbound turnout. A fill project description can be found on Page 2 of the enclosed FNAE.

Caltrans identified one historic property within the area of potential effect for the undertaking: the California Midland Railroad and associated Rail Bridge over Yager Creek. Caltrans has assumed this property to be eligible for the National Register of Historic Places (NRHP) due to large size in accordance with Stipulation VIII.C.4 of the 106 PA.

Caltrans applied the Criteria of Adverse Effect as defined in 36 CFR 800.5(a)(1) and found that no historic properties will be adversely affected by this undertaking. No aspect of the undertaking would alter, directly or indirectly, any of the characteristics of the historic property that qualify it for inclusion in the NRHP.

Based on my review of the submitted documentation, I have no objections to Caltrans' finding of no adverse effect for this undertaking.

If you have any questions, please contact Natalie Lindquist at natalie.lindquist@parks.ca.gov .

Sincerely,

Julianne Polanco
State Historic Preservation Officer

Appendix E. Prime Farmland Conversion Rating

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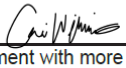
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		0.0			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		4			
PART V *(To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)*		73			
PART VI *(To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))*	**Maximum Points**				
1. Area in Nonurban Use	15	15			
2. Perimeter in Nonurban Use	10	10			
3. Percent Of Corridor Being Farmed	20	12			
4. Protection Provided By State And Local Government	20	0			
5. Size of Present Farm Unit Compared To Average	10	0			
6. Creation Of Nonfarmable Farmland	25	2			
7. Availablility Of Farm Support Services	5	5			
8. On-Farm Investments	20	15			
9. Effects Of Conversion On Farm Support Services	25	1			
10. Compatibility With Existing Agricultural Use	10	1			
TOTAL CORRIDOR ASSESSMENT POINTS	160	61	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland (From Part V)	100	73	0	0	0
Total Corridor Assessment (From Part VI above or a local site assessment)	160	61	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	134	0	0	0

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?
A	2.0	2/17/22	YES ☐ NO ☑

5. Reason For Selection:

Preferred alternative. This is a safety improvement project.

Signature of Person Completing this Part:  DATE **2/17/22**

NOTE: Complete a form for each segment with more than one Alternate Corridor

Clear Form

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Appendix F. Final Mitigation Summary

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Memorandum

Making Conservation a California Way of Life

To: Cari Williams
Associate Environmental Planner - Coordinator
North Region Environmental

Date: 4/4/2023

File: Carlotta Shoulder Widening
Hum-036 / 3.9-6.0
01-0J890 / 0119000119

From: Tim Nelson
Environmental Scientist – Mitigation Specialist
North Region Environmental

SUBJECT: MITIGATION SUMMARY - CARLOTTA SHOULDER WIDENING

The following California Department of Transportation (Caltrans) Final Mitigation Summary is for the purpose of offsetting impacts associated with Carlotta Shoulder Widening Project, 01-0J890 (hereinafter referred to as "project"). This Final Mitigation Summary addresses impacts associated with the project based on decisions made by the Project Development Team (PDT). The project would result in temporary and permanent impacts to sensitive habitats including riparian habitats regulated by the California Department of Fish and Wildlife (CDFW) and the North Coast Regional Water Quality Control Board (NCRWQCB) and waters of the United States (U.S.)/State including Clean Water Act (CWA) wetlands and non-wetland waters regulated by the U.S. Army Corps of Engineers (USACE), NCRWQCB, and CDFW.

PROJECT DESCRIPTION

Caltrans proposes to widen the shoulders and improve fish passage on State Route (SR) 36 in Humboldt County, from post miles (PM) 3.90 to 6.00 west of Carlotta, CA. Caltrans proposes to address safety concerns to reduce the frequency and severity of collisions. The primary safety features for the alternative include extending the westbound passing and climbing lane from PM 4.31 to PM 4.79, shoulder widening to a minimum of 6 feet where widening would occur, and constructing an eastbound turnout. New shoulder and centerline sinusoidal rumble strips are proposed. Existing Metal Beam Guardrail (MBGR) would be replaced with Midwest Guardrail System (MGS). New segments of MGS are proposed over Barber Creek, along the westbound passing lane extension, and adjacent to Wilson Creek. Widening shoulders and extending the passing lane over Ward Creek would require a bridge to be built over Ward Creek to address fish passage.

PROJECT IMPACTS

Caltrans proposes to meet all compensatory mitigation for project impacts through a combination of on-site revegetation and restoration and use of state wetland credits as outlined in the Cooperative Agreement for the HUM-36-Fen Parcel (APN 210-033-066) (hereinafter referred to as "Fen Parcel") between CDFW, NCRWQCB, the National Fish and Wildlife Foundation (NFWF), and Caltrans (2021). Table 1 below summarizes the impacts to waters of the U.S. and State, and riparian habitats, anticipated onsite offsets, and completed offsite mitigation at the Fen Parcel. A detailed description of the Onsite Restoration Monitoring Plan will be available once the area of restoration is determined based on final project design. At this time it is assumed that Caltrans will be able to offset all impacted riparian resources on-site, will utilize state wetland credits available at the Fen Parcel, and will offset all impacts to non-wetland waters habitats onsite either directly from Project activities (culvert to single span bridge) or through additional onsite restoration via removal of the old Ward Creek bridge as described below.

Table 1. Summary of Carlotta Shoulder Widening Mitigation Needs.

Jurisdictional Feature	Temporary Impact (acres)	Permanent Impact (acres)	Anticipated Onsite Offsets (acres)	Anticipated Offsite Mitigation (acres)
Non-Wetland Waters	0.040	0.012	0.040 (Culvert to Bridge) 0.035 (Old Ward Creek Bridge removal)	N/A; Offsets to be completed onsite; Old SR 36 Bridge considered "onsite"
CWA Wetlands	0.000	0.001	0.000	0.500-acre credits available at Fen Parcel
Riparian Habitats	0.652	0.075	0.727	N/A; Offsets to be completed onsite
Totals	**0.692**	**0.088**	**0.802**	

Estimated mitigation may be further refined following project scope refinement and additional discussions and negotiations with resource/regulatory agencies. The primary purpose of this document is to describe project mitigation intended to reduce project impacts to a less than significant level as described in Section 2.4 [Biological Resources] of the CEQA Initial Study and Mitigated Negative Declaration. The secondary purpose of the document is to provide a summary of project activities that will be implemented to offset impacts to other resources.

These measures include:

(1) Removal of the old Ward Creek bridge downstream of the current alignment (bridge location is old SR 36 alignment)[1] as onsite offsets for temporary and permanent impacts to non-wetland waters and riparian habitats,

(2) Additional on-site revegetation of riparian resources to achieve a success criteria of 100% replacement of all trees that were cut during construction,

(3) If necessary, offsite mitigation for wetlands via the use of state wetland credits as outlined in the Fen Parcel Cooperative Agreement agreed upon by NCRWQCB, CDFW, and Caltrans on 12/14/2021. According to Recital 2.f. of the Cooperative Agreement, Caltrans may apply credits for 01-0J890, Carlotta Shoulder Widening, HUM 36 PM 3-6, with an estimated impact of 0.500 acre to wetlands. Permanent impacts to Waters of the State (wetlands) from project activities are 0.001 acre, significantly less than the estimated 0.500 acre of impacts listed in the Fen Parcel Cooperative Agreement.

Caltrans proposes to offset impacts to all temporary and permanent impacts to riparian and waters of the U.S./State (non-wetland waters) habitats onsite; though due to further project refinement, offsite mitigation to compensate for permanent impacts to waters of the U.S./State (wetlands) will be required. Caltrans has identified and provided information below as viable onsite and offsite mitigation options to compensate for the project's temporary and permanent impacts.

PROPOSED ON-SITE OFFSETS/MITIGATION

The following on-site activities proposed to offset project impacts will include revegetation of riparian habitats and restoration of aquatic jurisdictional features at the project site.

On-Site Revegetation – Riparian Habitats

Within the proposed project footprint, all disturbed soil areas would be treated with erosion control consisting of a regionally appropriate seed mixture; seed would be locally sourced where possible. Additionally, Caltrans would implement onsite revegetation with appropriate native California plants in all disturbed soil areas of the project where feasible, however several constraints may limit these areas. Onsite revegetation is feasible in Caltrans R/W and where there is safe parking and access to the site during the planting, watering, and maintenance period. As applicable depending on final design and impacts, any riparian areas would be planted with

[1] Bridge located approximately 100' downsteam of project site on private property. Though not retained within Caltrans Right of Way (R/W), project is located on a parcel that adjoins Caltrans R/W and is viewed as "on-site" as defined by the RWQCB's State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (2019).

riparian vegetation with the goal to shade any waters and to replace habitat. To offset impacts onsite, 100% of the number of riparian trees that were cut for construction would be replaced by living, installed, volunteer, and/or resprouting native woody plants. An Onsite Restoration Monitoring Plan would be prepared to address sensitive vegetation replanting within the project area.

Revegetation is typically performed under the guidance of Caltrans Revegetation Specialists, and work is performed by the California Conservation Corps, a similar labor force, or an appropriate contractor. Planting commonly occurs one year after construction and is completed during the winter when the soil is wet from rain, and the plants are dormant. This timing also allows any erosion-control seed to establish and allows microsite conditions to develop. Planting during dormancy decreases stress on the plants and gives them the best chance of survival. Installed plantings are typically purchased through an outgrow contract of regionally appropriate stock to protect genetic integrity, or off-the-shelf if appropriate sourcing is available. Plants are typically caged to protect from herbivory, watered twice monthly during the first two dry seasons, mulched to suppress weeds and retain water, and weeded to decrease competition from non-native plants. Plant species are selected to replace habitat impacted by construction. Non-native plant species would be controlled in the revegetation areas to allow the plantings to establish. To the greatest extent feasible, Caltrans endeavors to eradicate any newly introduced invasive species ranked as having High ecological impact by the California Invasive Plant Council (Cal-IPC)[2].

In summary, due to the customary project development process, designs are incomplete at this early stage therefore details of onsite revegetation are under development, including type, locations, and total area. Some onsite revegetation activities will include replanting within temporarily disturbed riparian areas. Planting palettes and location details for proposed onsite

[2] Cal-IPC (http://www.cal-ipc.org/): The Cal-IPC Inventory categorizes non-native invasive plants that threaten the state's wildlands. Categorization is based on the assessment of the ecological impacts of each species. The Inventory categorizes plants as High, Moderate, or Limited, reflecting the level of each species' negative ecological impact in California:

High: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

revegetation will be specified in the Onsite Restoration Monitoring Plan which will be submitted along with permit applications for agency review.

On-Site Non-wetland Waters Restoration – Culvert Replacement with Single Span Bridge

Structural features for the project include replacing a 60-foot-long and 10-foot-wide culvert with a single span bridge at Ward Creek (at PM 4.39). The purpose of the proposed new Ward Creek bridge would be to accommodate a widened highway that would include the westbound passing lane extension and shoulder widening. The proposed bridge would be 60 feet wide with a span of 45 feet. This bridge would accommodate three 12-foot lanes (eastbound, westbound, and left turn), two 10-foot shoulders, and include vehicular and bicycle bridge rail. The most likely type of bridge deck would be a pre-cast/pre-stressed concrete slab with a depth of 1 foot 9 inches. The bridge type would be determined during the final design phase. Pile driving would be required to install the new pre-cast abutments. As a result of project activities including culvert removal and replacement of a single span bridge, impacts to non-wetland waters and wetland habitats will be both temporary and permanent and will be offset to the fullest extent possible onsite.

Onsite Non-Wetland Waters Restoration – Removal of Ward Creek Bridge (old SR 36 Alignment)

To compensate for impacts to non-wetland waters that cannot be offset at the project site, Caltrans proposes to remove an old bridge approximately 100 feet downstream of the current alignment and restore the bed, bank, and channel of Ward Creek (Figure 1). The old bridge was relinquished to a private property owner prior to 1970 and currently offers unauthorized access to private property from SR 36, leading to illegal dumping of solid and hazardous waste in Ward Creek and the adjacent floodplain (pers. comm. with current landowner, Mr. Mantova). In consultation with the landowner and regulatory agencies, the PDT identified the old Ward Creek bridge as viable mitigation to compensate for temporal and permanent project impacts to non-wetland waters and riparian habitats. As a result, Caltrans would demolish and remove the old bridge and recontour and revegetate the banks of Ward Creek to reduce erosion. Work proposed to be completed for the mitigation project would include the complete removal of all bridge infrastructure that includes, but may not be limited to, the old bridge deck, wooden rails, and two concrete bridge abutments as well as the possible removal of small portions of the existing old SR 36 roadbed near the structure.

Bridge Demolition: Caltrans proposes to remove all bridge related infrastructure spanning from below the Ordinary High Water Mark (OHWM) to above the bank, extending into the adjacent floodplain. Portions of the old SR 36 road that continue east and west of the bridge may be

removed near the structure to restore the Ward Creek bank and associated floodplain habitats. All construction material would be transported and recycled/disposed of at an appropriate facility offsite.

Bank Restoration: Following bridge demolition, Caltrans proposes to restore the banks of Ward Creek via the installation of regionally appropriate, native riparian vegetation and/or other erosion contol Best Management Practices (BMPs) including jute mats, straw wattles, erosion control seed/vegetation, etc. In addition to monitoring as part of riparian revegetation efforts, Caltrans would incorporate a monitor component to assess the stabilization of the Ward Creek banks/channel within the impacted area. Details of this monitoring will be included in the Onsite Restoration Monitoring Plan.

The mitigation project will have an impact analysis though Caltrans' Standard Measures and BMPs would be implemented which may include, but may not be limited to, worker education, erosion and spill contingency measures, and protections for biological, water quality, and cultural/historical resources. A final Onsite Restoration Monitoring Plan will be completed and submitted to the regulatory agencies with project permit applications.

Figure 1. Old Bridge within Ward Creek approximately 100' downstream of project site.

PROPOSED OFFSITE MITIGATION

Permanent project impacts to wetland resources that cannot be fully offset at the project site have been mitigated at the Fen Parcel as described in the Fen Parcel Cooperative Agreement and approved by the resource and regulatory agencies. Off-site compensatory mitigation utilizing state wetland mitigation values from the Fen Parcel is described below.

State Wetlands Credits - Fen Parcel

To compensate for impacts to state wetlands at the Project site, Caltrans proposes to utilize wetland credits at the Fen Parcel located along SR 36, between the towns of Bridgeville and Dinsmore, within the Larabee Valley 7.5 minute U.S. Geological Survey quadrangle. The parcel is located in the Lower Eel River HUC 8 Watershed (18010105) and Lower Van Duzen River HUC 10 Watershed (1801010509). The Fen Parcel is comprised of 114-acres of upland forest surrounding and encompassing a ~5.11-acre sensitive fen. The Fen Parcel adjoins a 155.3-acre CDFW parcel (Robey/Burke Peatland, APN 210-033-002) that contains the majority of the fen (Figure 2). Acquisition of the Fen Parcel was completed in 2022 to add further protections from land development activities that highly threatened the fen's sensitive resources.

The Robey/Burke Peatland was acquired in 2017 by the Central Federal Lands Highway Division of the Federal Highway Administration (FHWA), in cooperation with Caltrans, as preservation and compensatory mitigation for proposed impacts to State and federal waters associated with a California SR 36 project (CDFW 2017). Similar to this acquisition, Caltrans once again worked with CDFW to acquire the 114-acre parcel for preservation and compensatory mitigation for eight programmed projects occurring in the Lower and South Fork Eel River watersheds. On August 26, 2019, Caltrans issued a proposal letter to CDFW and NCRWQCB that the Fen Parcel to be purchased in CDFW's name as a conservation strategy would satisfy wetland mitigation needs associated with multiple potential transportation projects located along SR 36 and US 101, along the Lower Eel River Watershed, including the Van Duzen Watershed, and South Fork Eel Watershed. This mitigation would be used to mitigate for impacts of eight future Caltrans projects including:

a. 01-0C500: Bridge Rail Replacement-3 bridges, HUM 36, Hely Creek, Bridge No.4-92; Larabee Creek, Bridge No. 4-102; and Butte Creek Bridge No.4-116 with an estimated impact of 0.20 acre to wetlands;

b. 01-0F160: Carlotta Curve Improvement, HUM-36, PM 10.5-10.8, with an estimated impact of 0.25 acre to wetlands;

c. 01-0A111: Eel River Bridge Seismic Retrofit, Bridge No.04-0016R, HUM 101 PM M53.9, with an estimated impact of 1.0 acre to wetlands;

d. Caltrans ID 20286: HUM-36, PM 1-44.8, 35 culverts, with an estimated impact of 1.25 acre to wetlands;

e. 01-0H640: Hum 101 Drainage South, HUM 101 PM 0-54, 62 culverts with an estimated impact of 1.25 acre to wetlands;

f. **01-0J890**: Carlotta Shoulder Widening, HUM 36 PM 3-6, with an estimated impact of 0.5 acre to wetlands;

g. 01-0E010: Alton Shoulder Widening Project, HUM 36 PM 0.1-1.65, with an estimated impact of 0.5 acre to wetlands; and

h. 01-0H241: HUM 254 Culverts, PM 0.8-21, ten culverts with an estimated impact of 0.25 acres to wetlands.

CDFW issued a Concurrence Memorandum dated September 19, 2019, agreeing that the purchase of the Fen Parcel will mitigate for impacts to wetlands for the identified projects. Furthermore, Caltrans can return to the Fen Parcel at a later date and enter into a future cooperative agreement with CDFW to complete additional activities for transportation related mitigation. Similarly, NCRWQCB issued a concurrence letter dated October 7, 2019, also agreeing with Caltrans' proposal for wetland compensatory mitigation for the identified projects. A Cooperative Agreement was completed 12/14/2021 to purchase the Fen Parcel and provide additional endowment funds for the long-term management of the site. In April 2022, CDFW officially acquired the Fen Parcel and endowment funds were later transferred to an interest bearing account managed by NFWF. The estimated impacts to state wetlands for the identified projects equal approximately 5.20-acres though may fluctuate as project designs are furthered refined. As stated in the Fen Parcel Cooperative Agreement, Caltrans, in coordination with the NCRWQCB and CDFW, may, as funds are programmed and allocated for these possible transportation projects, shift the wetland compensation values between each of the identified projects on the list, as long as the total does not exceed 5.20-acres of wetlands impact.

Figure 2. CDFW owned parcels associated with sensitive fen habitats along SR 36. APN 210-033-002 was purchased and transferred to CDFW in 2017 as compensatory mitigation for FHWA projects. APN 210-033-006 was purchased and transferred to CDFW in 2022 as compensatory mitigation for wetland impacts as a result of eight Caltrans' projects.

REFERENCES

California Department of Fish and Wildlife (CDFW). 2017. Burke/Robey Peatland McClellan Mountain, Humboldt County, CA. Land Management Plan. Eureka, California.

CDFW, North Coast Regional Water Quality Control Board (NCRWQCB), California Department of Transportation (Caltrans), National Fish and Wildlife Foundation (NFWF). 2021. Cooperative Agreement No. 01-0404 HUM-36 Fen Parcel

California Invasive Plant Council (Cal-IPC). 2022. *Cal-IPC Inventory.* Accessed on August 18, 2022, at https://www.cal-ipc.org/plants/inventory/

State Water Resources Control Board (SWRCB). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State. Sacramento, CA.

Appendix G. Response to Public Comments

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Public Comments – Chapter 1

The following letters and comments were received during the CEQA public circulation period for the draft environmental document, an initial study with mitigated negative declaration, which circulated from September 22 to October 23, 2022. A hybrid public meeting, consisting of an in-person meeting with virtual access, took place at Cuddeback Elementary School on September 28, 2022.

Responses from the Caltrans Project Development Team are included after each public comment.

September 28, 2022 - Anonymous Written Comment received at Public Meeting

"Slow Down Not Speed Up Curve in 36 at Post Office is High Risk – East and Westbound. Slow Signage Needed"

Response:

Please see Response to Mr. Vaughn Hayes, #4, below.

September 28, 2022 – Written Comment from Jeff Ball during Public Meeting

"Jeff Ball
Sheet 1 from Presentation:
Vertical curve from Mennonite Church to Fischer Road is out of standard for speeds vehicles are traveling East/Westbound. Laurel Glen and Steamboat Springs are at a very great risk because of Limitation to site distance of the Hwy 36 vertical curve."

Response:

Please see Response to Mr. Vaughn Hayes, #4, below.

October 4, 2022 - Email Comment from Bryan Thomas

"Hi Cari,

I live in Carlotta and drive Highway 36 PM 3.0/6.0 nearly every day. I didn't have a chance to attend the recent public meeting for the Carlotta Shoulder Widening Project, so I would like to give some of my ideas for this project.

1) The existing Westbound passing lane on HUM 36 PM 4.1/4.4 could extend to the tangent at approximately PM 4.7. If extending the passing lane to approximately PM 4.7, consider shortening the west end of the passing lane from PM 4.1 to about PM 4.2 or PM 4.3 to mitigate the conflicts between accelerating merging vehicles at the end of the passing lane and vehicles entering highway 36 from Fisher Ln./Fisher Rd.
2) Consider adding center-line and/or shoulder rumble strip (with appropriate gaps at driveways and intersections).
3) Consider adding radar feedback signs and a 45 MPH zone encompassing the community of Carlotta, on highway 36, from about PM 4.8 to PM 5.5. Some vehicles insist on driving 50 to 55 mph through this S-curve. This S-curve encompasses 9 driveways, 4 cross-streets, several homes, a farm on both sides of the highway, a Post Office, and 2 parking lot egresses.

Response:

The Caltrans project team responded to the numbered portions of your letter and the corresponding responses are below.

1) The existing Westbound passing lane on Highway 36 was discussed in the planning phase. The lack of passing opportunity east of the project location contributes to collisions in the westbound direction where motorists tried to pass with insufficient sight

distance and a short passing opportunity. Passing requires a motorist to identify the opportunity, accelerate, and complete the maneuver before the passing lane ends. This project increases the length of passing opportunity and increases sight distance throughout the corridor. Given the proximity of the Yager Creek Bridge, the eastern taper for the passing lane extension could not be moved further east than currently proposed. The western end of this passing opportunity is already at the longest length possible given the geometry of the location. The long uphill before the curve at Fisher Road provides excellent sight distance for vehicles completing their passing maneuver. The longer the passing opportunity, the safer it is for drivers because it provides enough time for the passing maneuver to be initiated and completed. This is the longest passing lane which could fit at this location.

2) The project scope includes installing center-line and shoulder rumble strips at all practical locations. As a matter of policy, Caltrans does not install rumble strips up to driveways near residences, due to noise considerations. Typically, about 500 feet of distance between residences and the end of rumble strips are provided for sound comfort. A newer type of quieter rumble strip is planned for this project. This newer style of rumble strip alerts drivers who are veering off the road while generating less noise for residents along the roadway.

3) An existing radar feedback sign at PM 5.9 would be removed and a new radar feedback sign would be placed at PM 5.85. This change was made to improve the sight line to the feedback sign and increase the length of time drivers have to recognize the information and slow down prior to entering the lower speed zone.

   Additionally, changing the speed limit through the community of Carlotta is outside the post mile limits of this project but has been noted for future study. Establishing a speed zone change is a legal process and requires a formal process of evaluation and review, which is outside the scope of this project.

October 18, 2022 - Comment Letter from California Highway Patrol, Sergeant Gabriel Parker

"Good morning,

After reviewing the draft environmental document and Notice of Completion regarding the Carlotta Shoulder Widening Project, the Humboldt CHP Area expects the project to have a minimal to moderate impact on traffic in the area and minimal impact to CHP operations. The proposed widening will likely force the immediate construction area on State Route 36 to be mitigated by one-way traffic control measures. The one-way traffic control would need to be mitigated by either temporary, two-phase traffic lights or through the utilization of flaggers and a pilot vehicle system. Although through traffic on State Route 36 is typically light, logging trucks and local residents will feel an impact during the construction period.

As the project timeframe approaches, the Humboldt CHP Area request notification of any changes in the expected impact from the lead agency (DOT) and advisement if reimbursable contracts with CHP will be needed.

Response:

Caltrans would follow standard procedures with regards to notifying the California Highway Patrol. Caltrans standard measures for Traffic and Transportation are:

TT-1: Pedestrian and bicycle access would be maintained during construction.

TT-2: The contractor would be required to schedule and conduct work to avoid unnecessary inconvenience to the public and to maintain access to driveways, houses, and buildings within the work zones.

TT-3: A Transportation Management Plan (TMP) would be applied to the project.

Please note: the TMP is a dynamic document subject to change based on design evolution, event schedules, and field conditions during construction.

October 19, 2022 - Email Comment from Leslie Borges

"On Wednesday, September 28, 2022, a team from your agency appeared at the Cuddeback School for a community meeting on the topic of the planned proposal to "improve" a portion of Highway 36. Although I live just outside the area of alleged improvement, I was notified of the meeting. This proposal would have a direct impact on the location of my residence as well as many others which is why I feel the need to send you this letter.

The meeting was started off by telling us that this was to decrease the number of collisions that occur in the area subject to improvement between Laurel Glen Rd. and Wilson Ln. roughly. My husband and I have lived in our home collectively for over 30 years. Our home was built by his great-grandfather in 1932. During the time that we have lived here, I am only aware of three fatalities in that stretch of the road. So, I have to say that your reasoning is sorely misstated (***see response #1 below***). That stretch of the road is dangerous because the traffic has increased so much, and no one seems to understand driving the speed limit.

I think in this instance you have gotten the cart before the horse so to speak and should do some real studies of the traffic on this road (***see response #2 below***). Widening that section of road, straightening the curves, and lengthening the passing lane will only increase the potential for wrecks. We have your radar speed limit indicator just west of our house and it does not slow anyone down. If anything, they speed up to challenge it. As they pass my house headed East, they constantly drop below the white fog line. I can't tell you the number of times I have nearly been rear-ended just trying to get into my own driveway. In years past, we as well as the house across the road from us, have had vehicles lose control, wreck our fences, and nearly end up in our living rooms. It is not just our home, but we also have dogs in our yard that are at risk when these wrecks happen. I fear that if you proceed with this project there will be more of this happening to us.

Yes, improve the bridge at the creek to better the water flow and lessen the flooding of the road. In fact, get someone to clear out these culverts, before the rain hits, to help prevent the flooding (***see response #3 below***). As Mr. Johnson explained, the drainage ditches are overgrown, thus not allowing proper water flow, which is causing road flooding year after year.

I am extremely concerned about this project and the impact it will have on our community.

I sincerely hope that our communities' concerns do not fall on deaf ears and that you take heed to what we have to say on this matter.

Response:

The Caltrans project team has numbered specific portions of your letter and the corresponding responses are below.

1) Caltrans has adopted a statewide safety initiative to work toward zero deaths on our state highways. Caltrans analyzes California Highway Patrol (CHP) and other local agencies' collision reports in our research for factors contributing to collisions. Please see Chapter 1.1 (Page 1) of this Environmental Document for a description of collision data, injuries, and fatalities in the project area between 2013 and 2017.

   While it is possible that property damage collisions occur which are unreported, our analysis does include all reported vehicle collisions causing property damage to private property adjacent to the roadway. The proposed six-foot shoulders would improve the safety of adjacent properties by providing refuge and recovery room for errant vehicles. By creating more opportunities for vehicles to regain control, the risk of damaging adjacent property is reduced. Properties outside of the project limits would not be affected by the project.

2) Please also see: Response to Kathryn Hoke and George Hurlburt below.

3) State Route 36 near Johnston Stables, at post mile (PM) 6.32, is outside of the project limits. Much of Highway 36 east of Yager Creek and the surrounding communities are located within the floodplain of the Van Duzen River. Caltrans Maintenance staff regularly inspect and clean culverts and drainages within the state highway right of way. Ditches, culverts, and other drainage facilities outside of the right of way, including drainage areas on private property, are beyond the capacity and jurisdiction of Caltrans. If you suspect that a drainage within state right-of-way is blocked, you may submit a customer service request at https://csr.dot.ca.gov/.

   According to the Caltrans District Hydraulics Office Chief for Maintenance and Operations, flooding in this area may become more intense with climate change. The intent of Caltrans drainage facilities is to convey surface flows from the upstream side to the downstream side of the state highway right of way. Larger issues within watersheds are outside of Caltrans's control.

   The proposed new bridge at Ward Creek, which would remove a large culvert and replace it with a full span bridge, would improve drainage to this Van Duzen tributary. In addition, a future project is in development to repair and/or replace culverts on SR 36 in Humboldt County from the Alton Interchange, as well as build a bridge at Wilson Creek to replace the existing 100-foot long culvert.

Public Comments: Chapter 2

The following letters were received in response to requests sent in 2021 for permission to enter neighboring properties to complete project studies prior to the CEQA circulation of the draft environmental document. While not part of the CEQA circulation period, Caltrans is providing responses to these letters for the purpose of full and transparent public engagement.

July 16, 2021 - Comment Letter from Kathryn Hoke and George Hurlburt

“Dear Mr. Simmons:

Having received your letter of June 22 of this year, we have referred to it several times and studied the accompanying map. We hope that you or another representative of this road-widening project will take the time to explain to us exactly how "increased safety" is to be achieved, and whose safety is being referred to (***see response #1 below***).

To us, road safety would apply to the residents living along that road to at least an equal degree as that of those traveling the road. How does the provision of a half-mile of widened road just prior to entering the community of Carlotta do anything other than invite even greater speeding than already exists? (***see response #2 below***) You must be aware that the road around and through Carlotta is not patrolled, and therefore speed limits are not always respected. Are you not aware that a resident cannot always safely pull out of or into her own driveway? Here's an example: I can see more than a quarter of a mile to the east when I'm waiting to pull out of my driveway and head west. About half the time I will pass the neighbor's house just beyond mile marker 6 and there will already be someone on my bumper who covered that distance in 4 or 5 seconds.

Also, returning home from Fortuna along 36, as I slow to 45, then 35, then make the turn into my drive on the left, cars stack up behind me and often barely make the stop, even though I have signaled far in advance. How will widening the road not exacerbate this problem? (***see response #3 below***)

Mr. Simmons, if there are compelling reasons why this widening must be done that we haven't been able to figure out, can you please respect our community enough to treat it the way Bayside, Guintoli Lane, Indianola, and K Street (Arcata) residents have been treated – with speed humps and/or round-abouts to slow traffic through town? (***see response #4 below***) Remember - this area is not patrolled.

We think you (CalTrans) would face much better cooperation from local residents if you show us that OUR safety is important. We look forward to hearing from you soon.

Sincerely,
Kathryn Hoke
George Hurlburt”

Response:

The Caltrans project team has numbered specific portions of your letter and the corresponding responses are below.

1) The focus of this project is to address geometric details of the roadway which contribute to collisions and injuries. Travel lane widths and speed limits would not be altered. The value of a six-foot shoulder is to provide refuge for disabled vehicles. A narrower shoulder can be hazardous to both a disabled motorist and to vehicles traveling, particularly if a disabled motorist is close to or intruding into a travel lane (describe areas where there is not enough room for a disabled passenger vehicle). Rumble strips would be added where practical to alert drivers who may cross the center or shoulder lines.
2) Travel lane widths would not be altered. Widening the roadway to create a six-foot shoulder for disabled vehicles to seek refuge on, as well as provide recovery room for errant vehicles, would decrease collision risks in the situations you described. In addition to having a wider shoulder, this project would extend the existing passing lane, allowing for faster moving vehicles to use the left westbound lane while slower traffic, such as those entering and exiting the roadway from adjacent residences, would be able to use both the widened shoulder as well as the right westbound lane in the extended passing lane.
3) Another advantage of the six-foot shoulder is the recovery room it provides for vehicles forced to make an evasive maneuver. Our study of previous collisions identified cases where an evasive maneuver into a narrow shoulder resulted in a loss of control. The wider shoulder would be designed to provide safe harbor for vehicles. Traffic studies suggest a wider shoulder by itself is not a cause for vehicle speed increases, but rather that removing obstacles adjacent to the roadway plays a larger part in increased speeds. Since no road-adjacent obstacles would be removed for this project, increases to traffic speed are not anticipated.
4) While speed humps can successfully lower speeds in some residential areas with slower speed limits, they are not appropriate for rural highways. Similarly, roundabouts are outside of the scope of this safety project, which aims to increase sight distance at Ward Creek, create wider shoulders, and improving existing curves between post miles 3.9 and 6.0.

August 2, 2021 - Handwritten Letter from Vaughn Hayes
Transcribed on May 4, 2022

"I am certain that I am one of many who have received this letter from Dept. of Transportation that appreciate your considering (reasonably) our input. Timely for me personally, as I was going to call for an appointment to express my views personally to the Superintendent [illegible]. My community-minded son (my heir) could add nothing after days of contemplation. Each point listed I would seriously rate as a 10 out of 10; I assumed bike lanes, wonderful. Thank you.

Highway 36 Safety Improvements

- Wildlife tunnels (***see response #1 below***)
    - 8x8 w/ beveled edges and corners. Natural low groundcover for deer and quail.
    - One tunnel located above Barber Creek Rd.
    - One tunnel located at lower end of Hayes property.
    - Steel guardrail from Laurel Glen Rd to just below Mill Creek gulch (***see response #2 below***)
    - Replace deep ditch from Laurel Glen Rd. to the embankment at Mill Creek – then bridge the gap to the tunnel for deer passage. Make the width of the cross-over the same width as the tunnel.
    - Place reflector posts for both approaches to Barber Creek, Streamview, Laurel Glen, and Fisher Rd and Mennonite church parking lot (***see response #3 below***)
    - It is critical for safety purposes that hiway [sic] profile is adjusted so that drivers have an unobstructed eye level view from above Barber Creek Road well into the curve below Fisher Road (***see response #4 below***)
    - Deer/game tunnel needed just east of current 4-foot culvert at Yager Creek. Apparently that is inadequate as about 4 deer per year are killed on the Hiway there according to nearby rancher Eric Bess.
- These wildlife tunnels (hiway game crossovers) will save the diminishing game in our area I have lived on this property for over twenty years. I bought this property because game propagated here and it was a convenient access to my favorite deer hunting area east of here.
- Not only has the number of different deer diminished over the years I have seen fewer deer. There are fewer bucks and of lesser quality. Instead of healthy 4-points, fewer 2x3s, fewer forked horns and fewer small bucks with uniform spikes.
- It seems to me that there is more deer inbreeding because of hiway deaths limiting their range access. That in turn reduces their browse availability. Deer have been increasingly grazing even stubble in my yard and deer intolerant *Pittisporum* trees.
- I have trained each dog that I have owned to not bother deer or other game on our 1 3/4 acres. Always before going outside (day or night) we make sure that our dog see [sic] no game. At night when she goes out she is always on a restricting leash.
- The game populated our property first and we don't want to completely crowd them off."

Response:

The Caltrans project team has numbered specific portions of your letter and the corresponding responses are below.

1) The new bridge at Ward Creek would accommodate terrestrial animal crossings as well as fish passage. Because terrestrial animals tend to prefer to travel along riparian corridors, this new bridge is expected to improve opportunities for wildlife crossing. Wildlife cameras used at the Ward Creek culvert during project studies found a number of species already using the culvert, such as raccoons, coyotes, bobcats, rabbits, striped skunks, woodrats, and opossums. A full-span bridge, as proposed by this project, would enhance crossing opportunities for wildlife. It is anticipated that larger species, such as deer, may begin using the crossing instead of crossing the highway at this location.

2) Analysis of collision reports highlighted several short distances where new guardrail would be installed (e.g. over Barber Creek, along the westbound passing lane extension, and adjacent to Wilson Creek). Existing Metal Beam Guardrail would be replaced with Midwest Guardrail System throughout the project limits, which meets updated safety standards. The remainder of the project is not identified for the addition of new guardrail.

   Caltrans places guardrail at locations with a history of vehicles leaving the road and anywhere recovery distance beyond the roadway is limited, such as on the outside radius of a curve where there is a steep drop-off. Because adding guardrail also can create a new obstacle which vehicles can hit, it is not installed where collisions are minor or where hitting a guardrail could create a worse outcome than if the vehicle simply ran off the road into the grass.

3) Reflectors are typically added to guardrail posts, and appropriate locations for new reflectors would be finalized prior to construction.

4) The new bridge at Ward Creek would be designed with unobstructed sight distance to increase safety of all highway users at this location. In addition to extending the two-lane segment around the curve, the new bridge would include 10-foot shoulders which would significantly improve line of sight along the inside radius of the curve. This would improve safety by providing drivers a longer sight distance to see oncoming vehicles and slow vehicles ahead.

   This project was not designed to increase sight distance between Barber Road and Fisher Road. However, thanks to community input (such as letters, calls, and comments during the public meeting from you and your neighbors), Caltrans is aware of the concerns about sight distance on this curve. Our engineers have initiated discussions with the District 1 project planning teams and we will continue to study this area for potential future safety improvements.